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A Hand book for Settlers.

H. T. N. CHESSHYRE.

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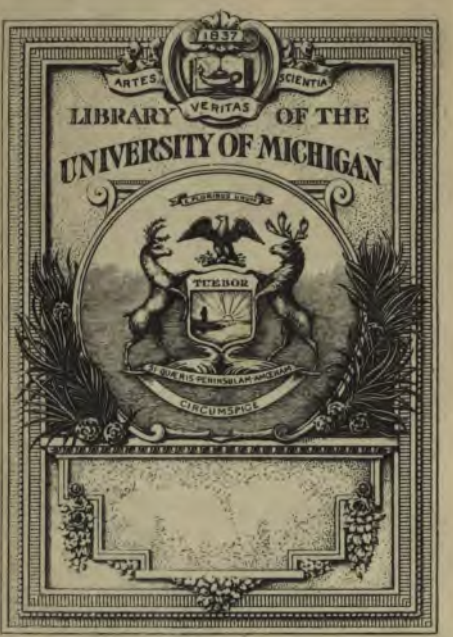
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CANADA IN 1864.

CANADA

IN 1864:

A HAND-BOOK FOR SETTLERS.

BY

HENRY T. NEWTON CHESSHYRE,

LATE R.N.,

AUTHOR OF "RECOLLECTIONS OF A FIVE YEARS' RESIDENCE IN NORWAY."

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PREFACE.

THE encouragement I have received as to my former small work, entitled "Recollections of a Five Years' Residence in Norway," induces me to offer this little volume to the public, particularly to those whose thoughts are bent on emigration to Canada, with the idea that my own six years' experience of the country may not be altogether useless to new settlers. The truthfulness and accuracy of the information contained in the book may, I hope, tend to exempt it from harsh and unfriendly criticism as to any deficiencies it may exhibit as a literary production.

LONDON, *September*, 1864.

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CANADA IN 1864.

CHAPTER I.

Those best suited for Canadian settlers—Modes of conveyance—"Ten reasons for emigrating to Canada"—Difficulties of new settlers much mitigated in the present day—Varieties of characters and of creeds in the backwoods.

WHAT class of intending emigrants is best suited for Canada, both with regard to their own advantage, and the benefit of their adopted country? It may seem almost superfluous to affirm that the indolent, and those wanting in physical activity and strength, have no business here; but the energetic and the temperate man can always obtain a living in this region, and need seldom fail of attaining an independence. Of many that do come out, it may be said that they are quite unfitted for settlers, and only do injury to themselves and those around them. I will just instance, by way of example, the case of government clerks, accustomed to a sedentary life in town. Many of these unwisely throw up their situations at home, and transport themselves hither

with, perhaps, a very exaggerated idea of their own importance in the colony, and apparently under the firm persuasion that a fortune is to be acquired without trouble, or that some lucrative colonial post will be speedily offered to them. These young men, disappointed in the fulfilment of their somewhat unreasonable expectations, are but too apt to degenerate into what our Yankee cousins elegantly term "loafers," passing from town to town, wasting their time and incurring debts at the taverns, and possibly sinking into confirmed whiskey-drinkers, thus ruining any prospects they might have had of success, and preparing for themselves a miserable end. Nor is this, in my opinion, a suitable country for the reform of the young prodigal. Such an one, banished to the backwoods and isolated from society, finds little wherewith to beguile his lonely monotonous hours, and will most probably fly for solace to the fatal whiskey-bottle, always at hand, and staring him in the face at every shanty.

But mechanics and labourers of every description—indeed all able-bodied industrious men—can almost invariably find employment in Canada;* and as fresh tracts in the far-west are gradually opened out and cleared for colonization, the more will their services be in request. The preconceived notions of a new settler regarding these parts are generally wide enough of the mark, and experience, as usual,

* See Appendix B.

must be his practical teacher; but it is better, at all events, that he should be prepared for the hardships necessarily incident to the early part of his career in the backwoods—hardships, however, which may be considerably mitigated by the possession of a strong, healthy wife, capable of household work and cooking. But whether with or without that helpmate and companion, let him steer clear of the seductions of whiskey, for here, if anywhere, he will ere long find to his cost, that "it biteth like a serpent and stingeth like an adder." By avoiding this temptation, and putting his shoulder resolutely to the wheel, he will, humanly speaking, be almost sure to prosper.

The settler of a higher grade must bury his pride, and must endeavour to reconcile himself to hard manual toil, and to many privations which will naturally be more irksome to him than to the labourer or the mechanic. Any assumed superiority of class or rank would be particularly obnoxious here, where, as in all recent and half-formed colonies, equality must to a great extent prevail at first. But such a settler, by adapting himself readily to the circumstances and the people among whom he has cast his lot, will, I think, prove to himself and to others, that in no country in the world is more true kindness and hospitality to be found than in the far West of Canada.

Steamers leave Liverpool and Glasgow every

week during the season for Quebec, the average duration of the voyage out being from ten to twelve days. The fare for the steerage passage is £7; that for the cabin, £15 and £18. The cost is, of course, considerably more than by sailing-vessel; but where the means are forthcoming, I think the extra money is well spent to ensure so much safer and better a mode of conveyance, unless in the case of a large party going out together. With the exception of some small items, to be enumerated hereafter, I should recommend you, as an emigrant, to encumber yourself as little as possible with luggage, taking with you only a good supply of *all* sorts of wearing apparel, which you would find it much more expensive to purchase in Canada. If intending to settle there, your things will pass free of duty, and an ample allowance of warm woollen clothing will be most desirable. Be careful to mark such goods as you expect to want during the voyage, or you may be much inconvenienced by the omission of this precaution.

Whatever your destination may be, do not linger at Quebec longer than is really needful; and should you require any assistance or instructions, apply at once at the Government Office, not listening to the numerous land-sharks, in the shape of self-interested counsellors, who will surround you in their anxiety to play the game of "Grab-loo" with you, or any other greenhorn, as a newly-arrived English-

man is termed in the city. A train is generally ready to start with emigrants for the West, and in England you will have been able to procure a ticket to convey you to any station on the Grand Trunk Railway, which traverses Canada to the extent of upwards of a thousand miles. If you are bound for the backwoods or the back country, you will on alighting find persons willing to afford you all the information in their power. There is commonly some conveyance running from the towns to the remote villages, but on this head I refer my readers to extracts from the Government and other pamphlets in the Appendix.* Railway travelling is cheaper here than in England, and there is a very good plan of checking every article of luggage, the owner being furnished with the corresponding number, which, if kept and produced, ensures compensation for your property in the event of its being lost.

Subjoined is an extract from a Canadian Almanack for 1864, which may be useful.

"TEN REASONS FOR EMIGRATING TO CANADA.

"The aim of the man who contemplates changing the land of his birth for another, being, generally speaking, the improvement of his condition, the question where the circumstances may be looked for most favourable to the realization of his desire

* See Appendix A.

claims his best thought. Such thought he owes to himself, to his family if he has one, and to those among whom he may decide on taking up his abode; because mistake in his choice may involve him and those he loves in disappointment and distress, and entail weakness on those to whom he should bring strength.

"In favour of the selection of Canada as his future home, the attention of the intending emigrant is respectfully invited to the considerations which follow.

"1. *Its accessibility.*

"Compared with other regions open to him, it may be reached in a very short time (eleven days by steam), at a trifling expense, and with a small amount of inconvenience.

"In sailing vessels, the rates of steerage passage vary, according to accommodation, from three pounds to four or five pounds sterling. The charge between Liverpool, Londonderry, or Glasgow, and Toronto, by the Montreal Steamship line, is £34, including provisions; between Glasgow and Quebec or Montreal, £29. By the Anchor Line, the charge between Glasgow and Quebec is £25. The Great Eastern charges £30 between Liverpool and New York. Its cabin rates are—1st cabin, £95—£135; 2nd cabin, £70; 3rd cabin, £50. By the Montreal Line, the cabin passage varies, with accommodation, from £72—£88. The cabin fare between Glasgow

and Quebec, by the Ocean Line, is £68; intermediate, £44. By the Anchor Line, £60; intermediate, £30. Children are carried by them all at lower rates, generally half price.

"Once landed at Quebec or Montreal, the emigrant may pass on to Toronto, or Hamilton, or any intermediate locality, by steamboat or railway, and thence by railway to the western extremity of the province. The Northern Railway will take him to any place he pleases on the route between Toronto and Collingwood, Lake Huron, whence he can pass on to Owen Sound and intermediate places by steamer. The cost of the passage by deck of steamer and second-class cars is, from Quebec to Toronto, a distance of 500 miles, about £5, with corresponding rates for places intermediate; to Windsor, the western extremity of the province, 631 miles from Quebec, £7 12½; to Barrie, 565 miles, £6 50; to Collingwood, 593 miles, £7. The time between Quebec and Toronto is by railway about thirty-six hours, by steamboat a day or two longer. Toronto may be reached by railway from Portland, the ocean terminus of the Grand Trunk, in from twenty-five to twenty-six hours.

"As, moreover, he may return to his old home so much more easily, should he for any reason wish to do so, he is less irretrievably committed by coming here than by going elsewhere. A visit to it is also at any time much more practicable, other things

being equal. His friends may likewise, if so disposed, follow him with much less of difficulty—thus renewing associations of which necessity had compelled the temporary interruption.

"2. *The scope afforded by its extent, both for the successful employment of his capabilities and the gratification of his tastes in the choice of a home.*

"Leaving out the territory to the north-west, the opening of which may be looked for ere long, Canada occupies a space stretching in a south-westerly direction from the Island of Anticosti in the Gulf of St. Lawrence, to the south-western extremity of Lake Erie, of about 1400 miles in length; with a breadth varying from 200 to 400 miles. Including water-surface, it is computed to contain an area of 349,821 square miles—242,482 exclusive of water. The number of acres comprised within it is estimated at 160,405,129; 128,659,684 of which are reckoned to Canada East; to Canada West, 31,745,533.

"'If an area,' it is remarked in a pamphlet published in 1860, by authority, 'be traced in Europe, corresponding generally to that occupied by Canada, in America, and the meridian of the most southern part of Canada be supposed to lie upon the meridian of Greenwich, in England, the south of France, at the base of the Pyrenees, will represent the south frontier of Canada; the south-eastern *boundary of this* area will stretch through France,

Switzerland, Bavaria, and Austria, to a point in the south of Poland, and a line drawn northward to Warsaw will delineate the mouth of the Gulf of St. Lawrence. The north-western boundary of this area will extend from the south of France, in a northerly direction, towards and beyond Brest; and a line drawn from near Brest to the British Channel, thence through England, Belgium, and Germany, to Warsaw again, will establish the position of a European area, corresponding to Canada in America. The inhabited and highly fertile portion of Canada is represented in this area by those regions which lie in the south, centre, and south-east of France, and in those parts of Switzerland, Bavaria, and Austria, included within its boundary. The other portion, although of vast extent, and not so well fitted for extended agricultural operations, is highly valuable on account of its timber and minerals.

"'The province of Canada embraces about 350,000 square miles of territory, independently of its north-western possessions, not yet open for settlement; it is consequently more than one-third larger than France, nearly three times as large as Great Britain and Ireland, and more than three times as large as Prussia. The inhabited or settled portion covers at least 40,000 square miles, and is nearly twice as large as Denmark, three times as large as Switzerland, a third greater than Scotland, and more than a third the size of Prussia; but such is the rapid

progress of settlement through immigration, that in ten years time the settled parts of Canada will be equal in area to Great Britain or Prussia.'

"According to the Crown Lands Report for 1856, the peninsula of Gaspé alone, which is 175 miles in length, with an extreme breadth of 90 miles, comprises an area, after the deduction of a small portion covered by New Brunswick of 11,800 superficial miles, equal to that of the European peninsula of Denmark, which it resembles in form. The Tadousac territory, valued as yet chiefly for its timber trade and its fisheries, is there stated to have a coast of 600 miles in length on the Gulf and River St. Lawrence, with a breadth of 160 miles and an area of probably 65,000 square miles; more than twice that of Scotland. The country drained by the Saguenay includes an area of 27,000 square miles, an extent equal to the Tyrol and Switzerland taken together. The quantity of land in it capable of cultivation is estimated at about 3,000,000 acres. The area drained by the St. Maurice is about 21,000 superficial miles; about one-tenth larger than the mainland of Scotland, and containing about as much arable land. 'Admirably watered, and intersected by magnificent rivers, with forests of pine alternating with rich tracts of hardwood land, and with that most valuable of all minerals, iron ore, in unlimited quantities, the country wants but the hand of man and the course of a few years to make

it equal to the most flourishing parts of Canada.' The area of the Ottawa and tracts therewith connected is estimated at 82,000 miles; one-fourth greater than that of the New England States.

"In the Great Manitoulin Island, which contains about 3,000,000 acres, upwards of 200,000 acres are expected soon to come into market. On the north sides of Lakes Huron and Superior there remains to be noticed an area of about 48,000 miles; one-half greater than that of the State of Maine.

"Regions so vast afford certainly ample room and verge enough, and will do for some time to come. Should they, however, become too strait, we have the North West to fall back upon, one-fifth of which, the Red River and Saskatchewan country, is computed to contain a territory exceeding in extent the empires of France and Austria united.

"3. *The physical characteristics of the country, its natural resources, and its healthfulness.*

"The variety of its products and abundance of its harvests attest, where proper care is bestowed on its cultivation, the excellence of its soil. And although in the longer settled parts of the country the best lands may be supposed to be occupied, and therefore attainable only at a considerable advance on the original prices, others quite equal to them are to be found in the newer regions which every year is bringing into the market. According to the Crown Land Report for last year, there are now in

the hands of the Government (surveyed) for disposal 5,908,557 acres in Lower Canada; in Upper Canada, 2,839,358½; in all, 8,747,915½, varying in price with situation.

"In Upper Canada, it is 70 cents per acre for cash, or one dollar when paid in instalments—one at the time of purchase, and the remainder in four equal annual payments with interest. In Lower Canada, the highest price is 60 cents, but the larger quantity is disposable at 30 cents per acre. In the Algoma District, Upper Canada, and in those of Gaspé and Saguenay in Lower Canada, the price is only 20 cents. The condition of settlement is exacted in all cases.

"Through these newer lands seven great roads have recently been laid out in Upper and five in Lower Canada. The Upper Canada roads are—1. 'The Ottawa and Opeongo Road,' which runs east and west, intended to be 171 miles in length, and to connect the Ottawa River with Lake Huron; of this, 62 miles are finished, on which 235 settlers are already located. 2. 'The Addington Road,' which intersects the Opeongo Road; on this, which is about 61 miles in length, there are 178 settlers. 3. 'The Hastings Road,' running nearly parallel to the Addington Road, and connecting the county of Hastings with the Ottawa and Opeongo Road, 68 miles in length, on which there are 306 settlers. 4. '*The Bobcaygeon* Road,' running north from

Bobcaygeon, between the counties of Peterborough and Victoria, meant to be continued to Nipissing; the number of miles completed is 36, the number of settlers, 168. 5. 'The Frontenac and Madawaska Road,' of which the number of miles completed is 33. 6. 'The Muskoka Road,' which runs from the head of the navigation of Lake Couchiching to the Grand Falls of Muskoka, where it will intersect what is called Peterson's line, which will eventually meet the Ottawa and Opeongo Road, now gradually opening westwardly. By this road, the intending settler can reach the centre of the county in one day from Toronto, whence he will proceed by Northern Railway to Lake Simcoe, and thence by steamer—21 miles are completed. 7. 'The Sault Ste. Marie Road,' intended to run from Sault Ste. Marie to Gonlais Bay,—four miles of which are completed. 8. 'The Burleigh Road'—45 miles are finished; there are nearly 100 settlers. In two years this line will be completed, to the English Company's townships.

"The five in Lower Canada are—'The Elgin Road,' in the county of D'Islet, 38 miles in length, from St. Jean Port Joli to the Provincial Line; 'The Montreal and Cap Chat;' 'The Taché Road,' from Buckland county of Bellechasse, to Kempt Road, Rimouski, about 200 miles; 'The Temiscouata Road,' from River du Loup to Lake Temiscouata; and 'The Kempt Road,' from Metis to Restigouche.

"Along these roads, free grants, not exceeding 100 acres in each case, are given by the government for the purpose of facilitating settlement, on the following conditions.

"1. That the settler be eighteen years of age.

"2. That he take possession of the land allotted to him within one month.

"3. That he put into a state of cultivation twelve acres of land in the course of four years.

"4. That he build a log-house, 20 by 18 feet, and reside on the lot until the foregoing conditions are fulfilled.

"'Families may reside on a single lot, and the several members having land allotted to them will be exempt from building and residence on each individual lot. The non-fulfilment of these conditions will cause the immediate loss of the land, which will be sold or given to another. The lands thus opened up, and gratuitously offered by the government for settlement, are chiefly of excellent quality, and well adapted, in respect of soil and climate, to all the purposes of husbandry.

"'The reports of the resident agents on these roads, for the past year, convey the most favourable accounts of the prosperity of the settlers thereon, and of the large amount of produce they have raised on the newly-cleared lands.'

"In the Crown Lands' Report for 1862, similar *accounts are given;* though a late statement excepts

certain parts of the Opeongo Road, which are said to be so rocky as to be incapable of cultivation.

"In its mines, in its forests, and in its fisheries, Canada has stores of untold, of almost inconceivable wealth; which its numerous lakes and rivers supply facilities for conveying to market.

"Of metallic minerals, the following are enumerated in a catalogue contained in 'Canada at the Universal Exhibition, in 1855,' to wit, Magnetic Iron Ore, Specular Iron Ore, Limonite (Bog Ore), Titaniferous Iron, Sulphate of Zinc (Blende), Sulphate of Lead (Galena), Copper, Nickel, Silver, Gold. Non-metallic—Teranium, Chromium, Cobalt, Manganese, Iron Pyrites, Graphite, Dolomite, Carbonate of Magnesia, Sulphate of Baryta, Iron Ochres, Steatite, Lithographic Stone, Agates, Jasper, Labrador Felspar, Aventurine, Hyacinthe, Corumdum, Amethyst, Jet, Quartzose Sandstone, Retinite and Basalt, Gypsum, Shell Marl, Phosphate of Lime, Millstones, Grindstones, Whetstones, and Tripoli. Under the head 'Building Materials,' are specified Granites, Sandstone, Calcareous Sandstone, Limestones, Hydraulic Limestones, Roofing Slates, Flagging Stones; Clays suitable for the formation of red and white bricks, tiles and coarse pottery; Moulding Sand, Fuller's Earth; and Marbles, white, black, red, brown, yellow and black, grey and variegated, and green. Of combustibles—Peat, Petroleum and Asphaltum, are named. Some of these are confined

to a single locality, others to a few places, but the more useful of them are widely distributed, and their quantities very great.

"Though our fisheries are as yet in their infancy, they employ from 1200 to 1500 boats, with nearly 100 vessels. The annual value of their products is, for Lower Canada, £942,528; for Upper Canada, £380,000; total, £1,322,528.

"Exclusive of furs, the products of the forest amounted, in 1860, to £11,012,253.

"Our climate, notwithstanding the extremes of cold and heat to which it is liable—which, however, are often greatly exaggerated—is eminently favourable, as the tables of longevity and the habits of the people prove, both to life and enjoyment.

"According to Professor Guy, the proportion of deaths to the population is, in

Austria . . .	1 in 40	England . .	1 in 46
Denmark . .	1 in 45	Norway & Sweden . . .	1 in 41
France . . .	1 in 42	Prussia . . .	1 in 39
Portugal . .	1 in 40	Spain . . .	1 in 40
Russia in Europe	1 in 44	Turkey . . .	1 in 50
Switzerland .	1 in 40	Upper Canada	1 in 102
United States .	1 in 74	All Canada .	1 in 98
Lower Canada .	1 in 92		
Belgium . .	1 in 43		

"'The salubrity of the province,' remarks Mr. *Hogan, from* whom we have taken the above table,

'is sufficiently proved by its cloudless skies, its elastic air, and almost entire absence of fogs. The lightness of the atmosphere has a most invigorating effect upon the spirits. The winter frosts are severe and steady, and the summer suns are hot, and bring on vegetation with wonderful rapidity. It is true that the spring of Canada differs much from the spring of many parts of Europe; but after her long winter the crops start up as if by magic, and reconcile her inhabitants to the loss of that which, elsewhere, is often the sweetest season of the year. If, however, Canada has but a short spring, she can boast of an autumn deliciously mild, and often lingering on, with its Indian summer and golden sunsets, until the month of December.

" 'A Canadian winter, the mention of which some years ago, in Europe, conveyed almost a sensation of misery, is hailed rather as a season of increased enjoyment than of privation and discomfort by the people. Instead of alternate rain, snow, sleet, and fog, with broken up and impassable roads, the Canadian has clear skies, a fine, bracing atmosphere, with the rivers and many of the smaller lakes frozen, and the inequalities in the rough tracks through the woods made smooth by snow, the whole face of the country being literally macadamized by nature for a people as yet unable to macadamize for themselves.'

"4. *The constituents and character of its population.*

"As a matter of course, its inhabitants share in the

common characteristics of the races whence they have sprung—which include the leading peoples of Europe, those especially of the British Islands, and France and Germany—and natives of the United States. The circumstances in which they are placed—the constant demand on them for exertion during the earlier period of their residence in the country, the self-dependence they are called to exercise, connected with the measure in which they are thrown on one another's sympathy, and the hopes amidst which they work, have a direct tendency to develop not a few of their better qualities. Even the variety of their previous modes of thought and action, though occasioning perhaps for a time some inconvenience, is a gain to them in the end by the contributions which it enables them to make severally to the common stock of ideas, and the habit which it produces of tolerance for unessential differences, consideration for one another's feelings, and appreciation of each other's virtues.

"An incidental advantage of no small value, resulting from the variety of origin to which allusion has been made, is the sympathy which the new comer may look for from his countrymen, with the measure in which the privilege of association with them helps to make him feel himself at home. This is a source of comfort specially open to emigrants from Britain, France, and the neighbouring *States.*

"Among the larger portion of our people there exists, alongside of the variety of origin alluded to, a homogeneousness which greatly facilitates their welding into one community, imparting to them, while the process is going on, a coincidence of feeling which makes living among them easy and pleasant, and secures their acting together in all matters of special moment.

"The beneficial influence mutually exerted by the new comer and the older resident on one another, is well brought out in the following passage of Mr. Hogan:—

"'It is a remarkable fact that the farmers of Upper Canada have opportunities of improvement, and of enlarging and correcting their views, beyond what are enjoyed by many of their class even in England. And this arises from the circumstance of the population being made up of so many varieties. The same neighbourhood has frequently a representative of the best farming skill of Yorkshire, of the judicious management and agricultural experiences of the Lothians, and of the patient industry and perseverance of Flanders. In a country so peopled, the benefits of travel are gained without the necessity of going away from home. Other countries, in fact, send their people to teach Canadians, instead of Canadians having to go to other countries to learn. A thousand experiences are brought to their doors, instead of their having to visit a thou-

sand doors to acquire them. Nor is the advantage of this happy admixture of population altogether on the side of the Canadian; for whilst he gleans from the old countryman his skill and his science, he teaches him, in return, how to rely upon himself in emergencies and difficulties inseparable from a new country; how to be a carpenter when a storm blows down a door, and there is no carpenter to be had, and how to be an undismayed wheelwright when a waggon breaks down in the midst of a forest, and there is no one either to instruct or assist him. The one, in short, imparts to a comparatively rude people the knowledge and skill of an old and civilized country; the other teaches skilled labour how to live in a new land. The consequence is, the old countryman of tact becomes, in all that relates to self-reliance and enterprise, a capital Canadian in a few years; whilst the Canadian, in all that pertains to skilful industry, becomes an Englishman.'

"The operation of the same fact, the mixed character of our population, on the culture of taste is shown in continuance of the above, but our space compels us to leave it unquoted. The principle may be applied more widely than it is by Mr. H. Its power is, in fact, co-extensive with our whole thinking and working.

"5. *Its institutions.*

"Nowhere is a more perfect freedom enjoyed than *here. Of a state* of liberty more complete it would

indeed be difficult even to form a conception. We live under laws of our own making or voluntary adoption, administered in courts established by ourselves, and by judges of our own appointing. The men by whom our general affairs are managed are chosen by ourselves and responsible to us for their conduct. Our municipal system gives the people a power in local matters which is supreme, and affords to the more ambitious and intelligent among them an opportunity of preparing themselves for the performance of higher duties, as well as of attracting the notice and securing the respect of the community. Of influence or station, there is nothing among us to which the poorest may not aspire.

"The general features of the municipal law of Upper Canada, and which, with some modifications, suited to the different state of society in Lower Canada, may be stated as the system in force throughout the province, are—

"The inhabitants of each county, city, town and township, are constituted corporations; their organization proceeding wholly upon the elective principle; and provision is made for the erection of new municipalities, as the circumstances of the country require, by their separation from those already existing. A complete system is created for regulating the elections, and for defining the duties of the municipalities and their officers. Their powers may be generally stated to embrace everything of a

local nature, including the opening and maintenance of highways, the erection of school-houses, and the support of common and grammar-schools; the provision of accommodation for the administration of justice, jails, etc., and the collection of rates for their support, as well as for the payment of petty jurymen; granting shop and tavern licences; regulating and prohibiting the sale of spirituous liquors; providing for the support of the poor; preventing the obstruction of streams; effecting drainage, both in the cities and county; inspection of weights and measures; enforcing the due observance of the Sabbath, and protection of public morals; establishing and regulating ferries, harbours, markets, etc.; abating nuisances; making regulations for and taking precautions against fires; establishing gas and waterworks; making police regulations; levying rates upon all real and personal property, including incomes, for all purposes; and, for certain objects, borrowing money; together with a great number of minor matters, essential for the good government of a community.

"In educational advantages we know of no country so young that exceeds us. By few of that class are we even equalled. Our common schools, established on the best principles and taught by well-qualified and honourably-conducted teachers, offer to our youth at large the means of qualifying themselves *for the intelligent* and efficient performance of the

duties awaiting them in their present social positions, or aiding them, if such be their wish, to raise themselves to such as are higher, either without cost or at a charge little more than nominal. For the obtaining of a still better culture our Grammar Schools, which are rapidly improving in character, offer all reasonable facilities; while our Colleges and Universities place professional training and instruction in the higher departments of learning and science within the reach of the possessors of moderate means, or such as, in the absence of these, may be disposed to maintain for a time a manly struggle for their own advancement.

"From a valuable table (T.) given in Dr. Ryerson's Report for 1861, we extract the following particulars, illustrative of the educational progress of Upper Canada between 1842 and 1861.

"The number of common schools was, in 1842, 1,271; 1847, 2,727; 1852, 2,992; 1857, 3,681; 1861, 3,910. The pupils attending these numbered in 1842, 65,978; 1847, 124,829; 1852, 179,587; 1857, 262,673; 1861, 316,287. Of Roman Catholic separate schools there are reported, for 1851, in which year they first appear in the returns, 16; 1857, 100; 1861, 109. There were in 1845, 2,860 common school teachers employed; in 1850, 3,476; in 1855, 3,565; and in 1861, 4,336. There were paid for salaries of teachers of common and separate

schools, erection and repair of school-houses, libraries and apparatus, in 1850, $410,472; in 1855, $899,272; in 1861, $1,191,413. Of the schools thus reported there were 252 free in 1850; 1,211 in 1855; and in 1861, 2,903.

"In 1842, there are supposed to have been in existence 25 county grammar schools. They numbered 32 in 1847; in 1852, 60; in 1857, 72; in 1861, 86. On these schools there were in attendance in 1847, 1,000 pupils; in 1852, 2,643; in 1857, 4,073; in 1861, 4,766. The salaries paid the masters were, in 1855, the first year in which they are given separately, $46,255; in 1861, $71,034.

"In 1842, we have reported, in addition to the above, 44 separate schools and academies (a supposed approximation); in 1847, 96; in 1852, 181; in 1857, 276; in 1861, 337. The number of pupils in these institutions was, in 1847, 1,831; in 1852, 5,684; in 1857, 4,073; in 1861, 4,766.

"We had in operation, in 1847, six colleges, with an attendance of 700 students; in 1852, eight, with 751 students; in 1857, twelve, with 1,335 (approx.); 1861, thirteen, with 1,373 (approx.)

"The amounts reported as paid for educational purposes in Upper Canada, were, in 1851, $599,980; in 1856, $1,326,992; in 1861, $1,476,107.

"The following table, by J. G. Hodgins, LL.B., F.R.G.S., taken from 'Eighty Years' Progress,' *etc. (p. 524), will* give an idea of the educational

advance of Lower Canada between 1852 and 1861.

Year.	Educational Institutions of all kinds.	Pupils.	Assessments and Fees.
1853	2,352	108,284	$165,848
1854	2,795	119,733	238,032
1855	2,868	127,058	249,136
1856	2,919	143,141	406,764
1857	2,986	148,798	424,208
1858	2,985	156,872	459,366
1859	3,199	168,148	498,436
1860	3,264	172,155	503,859
1861	3,345	180,845	526,219

"As to religious privileges, we are also on the whole favourably situated. The right of judging for ourselves in these matters is universally recognized; and in the eye of the law we stand on an equality. The common denominations have all a place amongst us, so that we may each, if such be our desire, have the opportunity of connection, in the older portions of the country, at any rate, with those among whom we may have been brought up, or who may be preferred by us. Fair allowance being made for difference in circumstances, the means of instruction will compare favourably as to character, in the greater part of these bodies, with those enjoyed by them elsewhere. Speaking generally, the usual forms of Christian exertion—the

Sabbath school, Bible class, Bible, Tract, and Missionary Societies, and kindred organizations—are found in healthful and vigorous operation among them. Notwithstanding their differing views, these denominations, moreover, dwell side by side in peace, treat each other with the courtesies common in other parts of the Christian world, and co-operate with one another for common objects, as much at least as is common in the lands whence they have come. The institutions for the relief of want and distress in its various forms, which usually follow in the wake of Christianity, have place and are carrying on their good work in our midst.

"6. *The union which it offers of the advantages characteristic both of the older and the newer states of society.*

"By selecting as their home the older parts of the country, those whose tastes would lead them to give the preference to the former may secure them in fair measure, provided they bring with them the necessary requisites in character, habits, and means; while such as are willing to share the usual fortunes of the latter, may calculate on the chances open to them in ordinary circumstances. Growth, with its attendant advantages, is in these chiefly a question of time and patience. At a much earlier age, and with much less of struggle than is requisite in older countries, the diligent and economical may *hope to place themselves* in a position of independ-

ence. As a general thing, the means of comfortable support is within the reach of the industrious, on conditions much less onerous than in these.

"7. *Its relations and status.*

"The emigrant to Canada has, in the fact of its forming part of the British Empire, the guarantee of one of the most powerful nations on the earth for his protection against injury from without. In this respect, as in every other, the mother country has of course a right to expect that we shall make every reasonable effort to help ourselves. Should the necessity arise, this will be done; and being done, there need be feared on her part no failure.

"Against the risk of any movement from within, which would interfere injuriously with him, he has equal assurance in the hearty loyalty and affectionate attachment of our people to the parent state, which would make them contemplate the prospect of separation with dislike, rather than pleasure.

"The connection of Canada with Britain gives her also a standing which, in addition to its agreeableness, is fitted to render important aid in her development. It tends to operate thus by the feeling of self-respect which it inspires and fosters, by the honours which it holds out to the ambitious the hope of sharing, and by the examples that are felt to be constantly inviting imitation.

"Retaining, as he does, his connection with the land of his birth, the native of the British Islands

who chooses Canada as his home, is saved from much of the feeling of expatriation which he would experience elsewhere. He finds himself but half a stranger, if even that. He looks with a pride, of which he was perhaps never previously conscious, on the old flag, as it floats over him; exults in his country's glories as his own; and finds a hymn in the National Anthem.

"8. *The steadiness and satisfactoriness of its growth.*

"A few particulars are all our space will admit in illustration of this.

"The population of United Canada numbered in the year 1800, 240,000. It was in 1825, 581,920; by 1851 it had reached 1,842,265. In 1861 it amounted to 2,506,755. The advance in Upper Canada between 1825 and 1861 has been from 581,027 to 1,396,091—not much less than 800 per cent. in 36 years.

"In 1831, the number of cultivated acres in the whole of Canada, Upper and Lower, was 2,884,345. It came up in 1844 to 4,968,408; and in 1851 to 7,300,837. The returns for Lower Canada, for 1861, have not yet been published. In Upper Canada alone, 6,051,619 are reported for that year.

"Upper Canada had, in 1851, 99,906 occupiers of *land.* They numbered, in 1861, 131,983. It pro*duced, in 1851,* 12,682,550 bushels of wheat;

11,391,867 of oats; 9,982,186 of potatoes; 3,110,118 of turnips; of flax or hemp, 59,680 lbs.; 3,669,874 lbs. of maple sugar. Its produce of these articles was, in 1861—wheat, 24,260,425 bushels; oats, 21,220,874; potatoes, 15,325,920; turnips, 18,206,959; flax or hemp, 1,225,934 lbs.; maple sugar, 6,370,605 lbs. The value of the live stock in Upper Canada was, in 1861, as much as $53,227,486; its agricultural implements, $11,280,347; its farms, $295,162,315. A similar progress will, we doubt not, be shown in Lower Canada, when its agricultural statistics for the year in question appear.

"In 1808, the value of the entire trade of Canada was about $8,400,000. The value reached, in 1852—exports, $14,055,973; imports, $20,286,493; total, $34,342,466. In 1861, its imports amounted to $36,614,195; exports, $43,046,823; total, £79,661,013. The value of the trade with the United States alone was, in the last of these years, £35,455,815; the imports from that country reaching £21,069,388, and the imports to it £14,386,427.

"In 1851, the net revenue yielded by the customs was £2,808,831; in 1861, £4,411,160. The value of books imported was, in 1850, £243,580; in 1861, £5,056,943.

"On roads, navigation and railroads, the province has expended as much as £60,000,000, over and above the interest in the latter of parties out of the

country. There are in use at this moment between 1,800 and 1,900 miles of railway; besides 3,422 of electric telegraph, belonging to the Montreal Telegraph Company, which had, in 1861, a capital stock of £400,000 (to which it had advanced from £60,000, in 1847), employed 400 persons (35 in 1847), and conveyed 300,000 messages; the number conveyed in 1847 having been 33,000.

"Our post offices have multiplied from 3, in 1766, to 69, in 1824; 601, in 1850; and 1,698, in 1860. The number of miles of established post roads was, in the first of these years, 170; in the second, 1992; in the third, 7,595; and in the last, 14,202. The miles travelled were, in 1766, 369; in 1824, 616; in 1851, 2,287,000; in 1860, 5,712,000. In 1852, 3,700,000 letters were transmitted; in 1860, 9,000,000. The expenditure of the Post Office was, in the former of these years, £276,191, and its revenue £230,629; in the latter, its expenditure was £534,681, and its revenue £658,451. One hundred and ten thousand dollars additional is paid per annum, by way of subsidy, to railroads; and four hundred and sixteen thousand to steamships.

"From the above it will be seen that our growth has been rapid, steady, and general; not coming by fits and starts, or confined in its sphere.

"9. *Its prospects.*

"It cannot fail, without fault on the part of its *people, to continue* growing and to become strong

and prosperous and influential; for it has in itself, in its geographical position, and in its relations, all the elements of greatness. But such failure is not to be anticipated, as self-respect, interest, and duty, unite in urging us to make the best of our position. The worst part of the struggle is over. To carry us to the height of any reasonable ambition, all that is necessary is perseverance for a moderate time in the self-denial and exertion of the past with the careful avoidance of its errors, as far as they may be discovered.

"The motive to throw in their lot with us, held out by such a state of things to those who may be contemplating change, is manifest. To witness progress is pleasant, how much more to share in it and to be made partakers of the advantages it yields.

"10. *The common feeling of such as have made trial of the country.*

"Few who have lived in it for any length of time, possessing the characteristics and pursuing the course necessary to success, would willingly exchange it for the lands whence they came. Nothing is more common than for those who visit their old homes, after a few years' residence therein, to feel impatient till they get back. Numbers who have left it with the intention of remaining at home, have returned to it unable to enjoy themselves there. The freedom realized here from the burdensome restraints of older

societies, and the social consideration which the deserving seldom fail to receive, help to explain the above state of feeling. In the fact of its existence, the new comer, or the man contemplating coming, has fair promise and assurance that he will, in due time, feel himself one of us, and at home among us.

"The classes to which Canada will be found specially adapted are—

"1. Farmers, and parties accustomed to agricultural pursuits.

"These may, if they bring moderate means with them, find cleared or uncleared farms, according to their taste, in most parts of the country, at prices moderate, though of course varying with quality of land, value of improvements, and location. Such as may be without the advantage of means may generally, if prepared to accept of reasonable wages, find employment and comfortable homes among our farmers. By satisfying themselves for a time with these, they gain an acquaintance with the country, the modes of working best suited to it, the most desirable locations, prices of land, etc., which will save them much to which they would be in danger otherwise of being subjected, and help them to work at advantage to themselves.

"Though not in an equal degree, parties previously unaccustomed to agriculture, if disposed to devote *themselves* to it, may secure these advantages by the *pursuance of the* same course. Numbers are found,

all through the country, with good farms, and in comfortable circumstances, who had their knowledge to acquire after their arrival. If possessed of the physical requisites, and the power of adapting themselves to new circumstances, none who make up their minds to persevere need despair, though, compared with the others, they must labour for a time under disadvantage.

"2. Mechanics, those especially of the more common descriptions.

"These may generally find employment in one part or another, indeed in almost any part of the province, at fair wages, and within a reasonable time. If well-behaved, industrious, and economical, they may hope to attain ultimately a good position both as to comfort and standing. Many of this class are to be met with in our cities, and even smaller towns and villages, living on their savings while yet comparatively young. Those of trades less common run, of course, more risk, though numbers even of these succeed in making themselves positions in the cities.

"3. The possessors of spare means.

"What they may be able and disposed to invest will afford this class much better returns here, without the adoption of any course involving wrong, than at home. They may also, if desirous of making themselves useful, obtain (provided they possess the necessary requisites) abundant means of doing so in harmony with their habits and tastes.

"The things needful to success in Canada, without which none can hope for it, and with which none need despair of it, are—

1. Fair health, intelligence, and capacity for useful action.

2. Good principles, and correct, honourable habits.

3. Steady and patient perseverance.

4. A cheerful and hopeful spirit.

5. The blessing of God."

From the foregoing "ten reasons" it will be manifest that Canada is one of the healthiest countries in the world. In some of the swampy grounds, near rivers that have been dammed up for the purpose of rafting down timber, ague has been very prevalent; but as the surrounding parts are cleared and cultivated, the disease vanishes. It may be as well to warn those who are coming out with the idea of at once obtaining one of the free grants of land given by Government, that, as soon as roads are opened, these lots are taken up mostly by old emigrants, and often as a speculation, with a view of reselling them at a profit to the new arrivals. The first settlers must of course encounter difficulties, though by no means to the same extent as was the case in former days, when they had to cut their own tracks through thick forests, and to *carry* their wheat and other grains on their backs *for sometimes* more than thirty miles. Now the

Government make good roads and bridges over the swamps; and when these are completed, saw-mills, grist-mills, and stores quickly spring up. The great evil in these new settlements is the number of shibeens or whiskey-shanties that are immediately erected, the liquor being in general of the worst quality, and adulterated with all sorts of poisonous ingredients. In the backwoods, where laws and licences do not as yet prevail, intoxication is but too common among the *mauvais sujets* who are sure to be met with. Every shade of character, and many varieties of professions, are here represented. The broken-down gentleman, the retired officer, the young and laborious aspirant to an independence, perhaps denied him at home, the ruined spendthrift, the desperate gamester, all may be seen in turn. And scarcely less diversified are the forms of religious belief—the English Churchman, the Romanist, the Presbyterian, the Methodist, the Mormon, *cum multis aliis*, each endeavouring to raise for himself a home in the wilderness.

The Englishman will yearn for the sight of that far-away spire among the trees in the old country village, and will miss the sweet sound of the bells that have so often summoned himself and his neighbours to the church of their forefathers. But as years roll on, his log-house, however solitary at first, will probably become the centre of a thriving township, perhaps eventually of a populous city;

and temples will be reared where not long ago the ancient primeval forests stretched far and wide in every direction, obscuring almost his view of the very sky. Meanwhile, he will be encompassed by the grand old temple of God's own making, the pathless, illimitable woods, such woods as in the eastern hemisphere suggested to his Teutonic ancestors the idea of their Gothic piles, and invested their architecture with its distinctive character of vast and noble simplicity.

CHAPTER II.

Arrival in the backwoods—Building a shanty—Necessaries for the first year, and their cost—Cultivation of the land—Beaver meadow hay—Rates of postage—Postal communication past and present.

I will now assume that you, the new settler, have arrived at your destination in the backwoods and taken possession of your allotment of land there. Your next step is to select a spot for your shanty, which should be erected near a running stream, or at all events where water is easily procurable in the immediate vicinity. If you have undertaken Government duties, your loghouse should measure 16 feet by 20 feet; if not, you can suit your own convenience, and unless you have a numerous family, 14 feet by 18 feet will be large enough. Having cleared the ground you must then cut your logs; pine logs are to be preferred if readily attainable, being generally straighter and easier to chop than others. The troughs for the roof should be either of pine or basswood; the latter is to be recommended as the lighter of the two, and consequently easier to handle and to split. A layer of these

troughs is placed on the rafters, and then one inverted over the edges of two. Having completed the preliminaries as far as possible, go round to your neighbours and ask them to "the Bee," *i.e.*, to raise your shanty. You will find them for the most part very ready to respond to your call, and in return you are expected to give them the best you can get. Your female neighbours (if you are fortunate enough to possess any) will aid you in your hospitable preparations. Unless you are yourself a good builder, commit the "bossing"* department to a more skilful hand; and in a few hours your shanty will be reared with right good will. Your door and a place for your window must of course be cut; the window itself you should procure before you go into the woods, and also hinges and nails for the door. Should there be no saw mill hard by, temporary boards may be made by splitting basswood with an axe: and if you have no stove, a fireplace may be constructed in one corner of flat stones, with a chimney formed of pieces of maple built up square, the bark being first stripped off, that the wood may be less likely to ignite. Or a square hole may be cut in the middle of the roof for the escape of the smoke, and the fire lighted on the floor, which should be raised by heaping clay or other earth upon it. For a large party the latter

* *The superintendent* or head-man is called "Boss," both in *Canada and in the States.*

contrivance is the more comfortable, as all may gather round the blaze, and it does not often smoke. Your dwelling should be lined throughout with moss, which abounds on the ash and various trees in the woods and swamps. Do not build too near one of the latter, or you will be constantly pestered by mosquitoes, and annoyed by the croaking of frogs.

It may be as well here to insert a table of necessaries and expenses for a man and his wife for one year:—

Provisions.			
4 barrels of flour at £1 . . .	£4	0	0
1½ „ pork . . .	2	0	0
30 bushels of potatoes at 2s. .	3	0	0
14 lbs. of tea at 3s. . . .	2	2	0
1 barrel of white fish—mackerel or herrings	1	10	0
Salt	0	5	0
Seed.			
10 bushels of potatoes at 2s. .	1	0	0
3 „ wheat at 5s. .	0	15	0
10 „ oats at 2s. . . .	1	0	0
Other Necessaries.			
1 axe	0	6	0
1 grindstone	0	7	6
1 shovel	0	2	0
Carried forward . .	£16	7	6

Brought forward .	£16	7	6
2 hoes at 3s. each . . .	0	6	0
1 brush hook	0	4	0
1 scythe	0	5	0
1-inch auger	0	4	6
1½- „	0	5	6
1 hand-saw	0	7	6
2 water-pails	0	2	6
1 window sash and glass . .	0	5	0
1 bake-oven	0	7	6
2 pots	0	10	0
1 kettle	0	5	0
1 frying-pan	0	3	0
1 tea-pot	0	2	6
3 tin dishes	0	7	6
6 spoons	0	1	0
6 knives and forks . . .	0	5	0
3 pairs of blankets . . .	3	10	0
2 rugs	0	7	6
2 pairs of sheets* . . .	0	6	0
1 smoothing iron . . .	0	2	6
	£24	15	0
1 pig	0	12	6
1 cow	4	0	0
Hay	3	0	0
	£32	7	6

* *Sheets* are rarely used at present in the far backwoods.

For the first year you could manage well enough with an open fireplace; in the second you would require a cooking-stove, which may be purchased with all appliances for £5 sterling, sufficient for your purpose. Should you own any light carpenter's tools, bring them with you into the backwoods, where every little article may come into use. Of the necessaries enumerated above, the cow may, during the first twelvemonth, be dispensed with, in which case the hay for its use will of course not be required. As to hay, the backwoodsman can, generally speaking, collect enough for his cow; the hay from the beaver meadows is very good, particularly the blue joint. Salt must be strewn over it as it is stacked, and in feeding the cattle or horses, it is advisable to administer to them about a tablespoonful of sulphur once a week. Some of the beaver meadows* are of great extent, capable of producing many tons of hay; and it should be one of your first cares to discover and select one not already claimed; and, if late in the fall of the year, set fire to it and let it burn all over, clearing away the rubbish for mowing. Stack all your hay in one heap if possible, for much of it is lost in the cold season from the lower parts of the small stacks being frozen. During the summer and autumn your cattle will find

* Beaver meadows, *i.e.*, originally beaver ponds; they became meadows from the beaver dams having been destroyed, and grass springing up where there was formerly water.

excellent browsing in the woods and at the edges of the beaver dams. Sheep must not be left out at night in the new settlements, on account of the wolves. Cattle will almost weather out the winter alone by browsing on the fallen trees, the bass-tops especially; and they will light upon many pickings along the roads where lumbering is going on, and at the feeding places.

You will probably find the axe unwieldy at first, but you must not be discouraged by the difficulty, for you ought during the winter to chop four acres, which should be underbrushed before the snow begins to fall. This process of underbrushing is best accomplished by means of a brush-hook, a short thick scythe made for the purpose. All the lesser trees and the small stuff are to be chopped and laid in brush heaps; then at the commencement of the winter, chop your high trees, reserving such as you require for logs, or for splitting into rails. Your land being logged and burnt, sow your spring wheat and drag it in, no ploughing being needful the first year. If you are unprovided with oxen for logging, and your timber is too large to lay yourself with the help of only one other man, you must again have recourse to "a Bee."

After a time your drawbacks and troubles will gradually decrease; meanwhile one piece of advice *I would* fain impress upon every new settler, and *that is, to keep* on good terms with your neigh-

bours, bearing in mind the words of the old song,—

"Lend a helping hand to others,
It always bringeth bliss."

What is more or less the case everywhere, is especially brought home to one in the backwoods—that man is dependent upon his fellow-man. In all probability you will be repeatedly asked for the loan of all the things you possess—lend them if possible, but always insist on their being returned to you at a stated time. In one of my localities, I happened to own more useful articles than my neighbours, and I was in consequence pestered morning, noon, and night by my borrowing friends. I began by lending almost unconditionally, but I soon discovered the necessity of stipulating in the first instance that the things borrowed should be restored to me at such an hour or on such a day, as it might happen; and by adhering to this rule I was able to oblige others without being deprived for an indefinite period of the use of my own property. If any one failed to comply with my regulation, I chalked his name on the door with that of the article unduly detained against it, to signify that I should not lend to him again.

As soon as anything like a settlement springs up in the backwoods, a school-house is erected, which generally serves also for a place of worship on Sundays. As buildings and inhabitants multiply, a

local postmaster is appointed, who must find security for the fulfilment of the duties of his office. The following are the rates of postage in Canada:—

Letters to any part of Canada, Nova Scotia, and New Brunswick	5	cents.
„ England by Canadian packets	12½	„
„ The United States	10	„
„ British Columbia	25	„

Letters to England must be directed to go "by British Packet" or "by Canadian Steamer."

Letters can be registered in Canada for 2 cents, both the postage and the registration fee must in every case be prepaid.*

A parcel by parcel post is 25 cents within the province, and 3 cents additional if registered.

Handbills, books, etc., 1 cent per ounce.

Printed circulars containing prices current, 2 cents each.

Books to England, 4 ounces, 7 cents; 8 ounces, sixpence sterling; and for every additional 8 ounces sixpence sterling.

CANADIAN NEWSPAPERS.

	PER QUARTER.
For a paper published 6 times a week,	40 cents.
„ „ 3 „ „	20 „
„ „ 2 „ „	13 „
„ „ 1 „ „	6½ „

* *If not,* double postage is charged.

Where the postage is not paid in advance, 1 cent is charged on delivery.

Newspapers from England by Canadian packet are free; by United States, 1 cent on delivery.

Periodicals on agriculture, education, temperance, etc., are delivered free of charge.

Money orders may be sent, as in England, at the following rates:—

10	dollars	. . .	5 cents.
20	„	. . . .	10 „
40	„	. . . .	20 „
60	„	. . . .	30 „
80	„	. . . .	40 „
100	„	. . . .	50 „

No single order can be issued for more than 100 dollars.

Orders payable at any money-order office in Great Britain and Ireland can be obtained at any Canadian money-office.

Stamps are sold for the different degrees of postage. The postage law and the misdemeanours connected therewith are the same as in England.

Is it not strange to contrast the present state of postal communication, even in the remote and thinly-peopled districts of our colonies, with that which prevailed in Great Britain not a hundred years ago? The time that was then consumed in the conveyance of a letter or a newspaper from London to Edin-

burgh would now suffice to waft it across half the Atlantic Ocean. Among the many valuable advantages that the invention of steam locomotion has bestowed upon mankind, we may reckon as one of the greatest the easy and rapid transmission of news, both public and private, from the mother-country to her most distant possessions. And when we look at the still more recent marvels of the electric telegraph, which promises ere long to encircle the earth as with a zone, we feel that time and space are thus comparatively annihilated, and our friends and relations in the other hemisphere, or on the further side of the equator, are drawn, as it were, almost within the reach and compass of our daily life by the happy discoveries of those great men whose names will ever adorn the 19th century, and render it a memorable one in the annals of science.

CHAPTER III.

Taxes—Duties required of the settler—Volunteers—Naval brigade—Ways of making money in the backwoods—Potash—Berry-picking, etc.—The tea-plants of North America—Other vegetable prduoctions—Receipts—Cookery.

The taxes in Canada are very light, and a colonist may be settled in the backwoods for years before the tax-gatherer calls: my farm was 150 acres in extent, and my taxes never amounted to £2 per annum; but of course much or all depends on the value of the property. Every resident in this country is called upon to perform statute labour for not less than two days, of eight hours each, in the year, unless he provides a substitute, or pays half-a-crown (English money) per diem for exemption. The statute labour exacted of the owners of farms varies with the size and worth of such farms; for mine above mentioned, five days' attendance fell to my share. According to the Canadian laws, every man under forty-five years of age is required to serve in the case of war or rebellion, and by the new Militia regulation to join muster once a year, generally on the Queen's birthday. The bachelors

from sixteen to forty-five years are first called out, and, when they are exhausted, the married men have to take their turn. Schools for military instruction are about to be established. Any one able to drill a company of infantry through all its manœuvres is entitled to a bounty of fifty dollars; and when capable of doing as much by a whole regiment, he having at the same time acquired a thorough knowledge of battalion drill, may claim another fifty.

Volunteering and playing at soldiers is all the rage just now; every township has either its infantry, cavalry, or rifle corps; and boys from the age of twelve and upwards parade in scarlet jackets, while the ladies occupy themselves in working colours for the volunteer regiments. The Government provide them with arms, ammunition, and uniform. The New Militia Bill has caused great dissatisfaction among the older officers, as it allows no one over forty-five to be eligible for a command, and some of the veterans have been waging fierce war with the pen against the powers that be, for having forbidden them to do so against a foreign foe with the sword. A settler imbued with a military mania can turn out fully accoutred, and should he possess any knowledge of warlike evolutions, they may be of service to him. Naval brigades have been formed in the principal towns, and I am *told that* the fresh-water sailors make a very re*spectable appearance* on land. In one instance the

senior officer is a whiskey-distiller, and the lieutenant a schoolmaster; what sort of a figure they would cut afloat I could not venture to say.

To revert to more peaceful operations. The backwoodsman has several ways of turning his time and resources to account. If he has hard woodland, let him husband his ashes and convert them into potash, which yields a profitable return. Any quantity of it can be made while the land is being cleared. Then, again, there is the sugar-bush, which will pay him well in a good season; indeed, I have known many settlers make 600 lbs. of sugar, which at 5*d.* per lb. is worth £12 10*s.*, without reckoning vinegar enough to supply his wants, to be obtained from the molasses. Should he be located in a district rich in berries, his wife and children should gather the raspberries, thimbleberries, and huckleberries, which, when dried, will fetch 10*d.* a lb. Wherever the woods are burnt, these fruits spring up and grow wild in profusion. The thimbleberry resembles the English blackberry, but exceeds it in size, and much excels it in flavour; the huckleberry abounds also on some of the plains, and forms an attraction to pic-nic parties during the warm weather. All these fruits compose an excellent preserve or jelly, as does the cranberry, of which there are two sorts, one growing on a tree. In some parts of Canada raspberries are so exceedingly plentiful, that the inhabitants have steam-

machinery for making them into jam; and a friend of mine has informed me that one man residing near Sault Ste. Marie clears an annual profit of £600 by this manufacture. The mandrake also flourishes without cultivation, and affords a jelly similar to the guava of the West Indies. The fruit of the butternut-tree is serviceable for pickling; it is not quite so large as the walnut, but at least as good, if not better, for the purpose. The hazel-nut is also to be met with, but the kernel is much smaller here than in England. Under the hiccory trees you are sure to find innumerable nuts, thrown down by the black squirrels (which I may remark, *en passant*, are capital eating, either in a curry or a pie). Wild cherries are to be met with almost everywhere throughout Upper Canada, supplying the colonist with one ingredient for his cherry-brandy or whiskey. The mushroom is common in some of the cultivated lands, as also the morell, growing chiefly beneath the pines. It is good eating when stewed, and makes famous ketchup.

The woods and marshes abound in two species of tea-plant, the Labrador and another of the same class; both are imbibed extensively, particularly among the Indians, and are said to be wholesome and exhilarating. Professor Johnson remarks—"Labrador tea is the name given in North America to the dried leaves of the *Ledum palustre* and the *Ledum latifolium*. The plants grow on the borders

of swamps, and along the heathy shores of mountain lakes. The narrow-leaved *Ledum palustre*, according to Dr. Richardson, gives tea of the better quality. Both are very astringent, and possess a narcotic, soothing, and exhilarating quality. The narcotic quality is so strong, that, in the north of Europe (Sweden and Germany), these plants are secretly employed by fraudulent brewers to give headiness to beer. From the above facts we may infer that, besides a variety of tannin to which they owe their astringency, they contain an active narcotic principle, more powerful, probably, than the theine of the tea-leaf, to which their peculiar exhilarating and stupifying effects are due." Besides these we have other North American substitutes for the China leaf, distinguished by the names of Appalachian, Oswego, and Santa Fé Mountain teas. The bark of a wood much resembling dogwood is made into tea by the Indians, and also the bark of a mountain ash, which I have heard much praised by them. Sarsaparilla is plentiful in most of the Upper Canadian woods: it is reported, however, not to be possessed of the qualities of the Honduras variety. I add the names, with short descriptions, of some other trees and herbs; and also a few receipts, which may be useful in the backwoods.

The common Berberry.—The berries make an excellent and wholesome jelly, when preserved with their own weight in sugar; pickled while still green

in vinegar, they are a very good substitute for capers. The bark is purgative and tonic; a decoction of it is a serviceable gargle for sore throat, and the berries, when bruised, form a cooling beverage in fevers.

The Prickly Ash.—The bark and capsules of this species have a hot acrid taste, and, when taken internally, act as a powerful stimulant, beneficial in cases of rheumatism, intermittent fevers, and toothache. Lawson remarks that from the berries has been extracted a medicine possessing the salivating properties of mercury, and that a decoction of the plant acts as a strong sudorific.

The Purging Buckthorn.—The juice of the unripe berries is of the colour of saffron, and is used for staining paper and maps. The juice of the ripe berries, evaporated to dryness with alum or lime, is the sap-green of painters; if the berries are gathered late in the autumn, their juice is purple. Twenty-five or thirty of them will produce a strongly purgative effect, but they are not much in favour now, owing to the violent sickness, griping, and thirst occasioned by them. The inner bark affords a beautiful yellow dye; like the common elder, it is a powerful cathartic, and excites vomiting.

The Flowering Dogwood.—The inner bark of this tree is exceedingly bitter, and has proved an excellent substitute for Peruvian bark. It may also take the place of galls in the manufacture of ink; from

the bark of the more fibrous roots the Indians obtain a scarlet dye. An infusion of the flowers is used in intermittent disorders.

The Sorrel Tree.—The leaves have a pleasant acrid taste, and are known to hunters as a means of allaying their thirst. A decoction is made from them, forming a refreshing beverage in fevers. The branches, when combined with salts of iron, yield a black dye; in Tennessee they are employed in colouring wool.

The American Rose Bay Tree.—Although not growing wild so far north as Upper Canada, it may be seen in some pleasure gardens, where, in its early stages, it requires protection during the winter. The leaves are sudorific and narcotic, and have been given successfully in rheumatism.

The Mountain Laurel.—The American Indians make small dishes, spoons, etc., from the bark. A decoction of the leaves has been known to be swallowed with a view to self-destruction. They are applied in a pulverized form, internally for fevers, and topically for the relief of cutaneous affections. A few drops of the tincture, which were once poured on the body of a large and vigorous rattlesnake, killed it in a short time. The powder on the leaves is taken as snuff in some parts of the country.

The American Ash.—Shafts, felloes of waggons, frames of carriages, spade and hoe handles, etc., are made from the wood. The inner part of the bark

imparts a very permanent yellow to skins, and is used with advantage in dyeing wool.

The Silvery-leaved Shepherdin.—The fruit makes an excellent preserve, and the jelly is thought preferable to currant.

The Lobelia.—It grows wild, and an infusion of the leaves acts as an emetic.

The Maiden-hair Capillaria.—This flourishes everywhere; from it is extracted the excellent Sirop de capillaire.

RECEIPTS.

For sprains and swellings.—Boil some elder bark, and foment the parts affected. (A concoction of this bark makes a strong emetic.)

For bad cold.—Steep some small cedar boughs in boiling water, and soak the feet in it at a moderately warm temperature.

For those who live or work near marshy, swampy grounds.—Take equal parts of wild cherry, slippery elm bark, and prickly ash, and pour whisky over. Drink a small wine-glassful before going out in the morning.

For exhaustion produced by over-exertion and fatigue.—Ginseng. It was formerly gathered in quantities by the Indians round Montreal, and much was exported to China. Father Jartout, a Jesuit missionary there, describes its remarkable effects *upon himself.* His pulse and his appetite were increased, and his whole frame was invigorated.

For colds and diseases of the lungs.—The Iceland or reindeer moss boiled down to a jelly. It is very nourishing; and in Norway, in times of scarcity, it forms the chief diet of the poorer inhabitants, mashed and boiled with the inner bark of the pine tree.

For cuts and wounds.—Pure balsam. On the stem of the tree you will observe the bark raised in the shape of little round heaps, which are full of the balsam. Cut away the bark with a sharp knife, and insert the point to make the gum exude. Cover the injured part therewith, and it will soon heal.

For ague.—Cayenne pepper and whiskey are much used by the Indians in this complaint, and, combined with wormwood, they form an excellent remedy.

For horses, when hide-bound.—Tamarac bark, pounded and mixed with a bran-mash, is capital.

Every store in Canada is full of quack medicines of every variety, professing to cure all the ills that flesh is heir to. Certainly "Ayer's Cherry Pectoral" is much to be recommended for coughs and colds the ingredients are bitter almonds and morphia. Quack doctors abound, and thrive, I believe, more than the regular practitioners; partly, I fancy, from their charges being lower. In this country the medical man is rarely sent for until the patient is at death's door, and then the former is blamed for not making the latter a sound man again.

Hops grow plentifully in the backwoods, but they are seldom employed in making yeast. A

bachelor having to manufacture his own bread, will find, in the absence of carbonate of soda, that common salt will answer his purpose. Mix a little flour and salt with some milk, and put it near the fire, and at the end of a few hours you will have a capital substitute for yeast. If you have no oven, which is, of course, the best thing for the purpose, you may bake your bread in a frying-pan, placed in an almost perpendicular position before the fire, and kept constantly turning; or you may bury your dough in a heap of warm ashes. With the help of an iron pot, Norwegian *grœd* can easily be concocted, and famous stuff it is. Put a lump of butter into your saucepan, and when melted, add a little flour, rolling it round to prevent its becoming burnt; increase the flour gradually until you have a sufficient quantity, adding also milk or water, and stirring all constantly with a spoon; when it has boiled, or rather simmered, for half an hour, you will have provided yourself with a capital breakfast or supper.

The Indians generally roast their meat before the fires with forked sticks placed in the ground, and a duck eats better cooked in this way than in any other that I know of. The bird is suspended with its head downwards, the neck being tied up to prevent the escape of the gravy. White French beans, boiled with a bone of salt pork, make excellent fare for the backwoodsman, much to be recommended before encountering a hard day's work.

The bean will grow on any land, and fetch a good price in the market. Your meat should be boiled or stewed slowly, with the pot completely covered, or the best part of your food vanishes in thin air. The lower class of English are proverbially bad cooks, frying or boiling their meat to a cinder, and thus wasting much of it. A man intending to emigrate to these woods would do well to acquire beforehand a little knowledge of the culinary art, which is at a wretchedly low ebb here; he should also have some insight into the butchers' trade, in order that he may improve upon the custom now usually in vogue when animals are slaughtered. Directly an ox or a sheep is killed, and while the flesh is still quivering, it is cut, or rather hacked, into all conceivable forms, quite regardless of rule; then the joints (if they may be so called) are pitched into a cask, which is filled up with salt. The sheep's head and trotters are thrown away as useless things; a sample of the waste and profusion you may often witness among the inmates of a loghouse.

CHAPTER IV.

The Red Indians—Sir F. B. Head upon them—Their character—How influenced by association with the white men, and the introduction of ardent spirits among them—Their present condition—Specimens of their legends.

THE following extract from the remarks of Sir Francis B. Head, who, as is well known, was Governor of Canada during the rebellion of 1837, on the Indian race, will, I think, be the best possible introduction to the subject of my present chapter :—

"The fate of the red inhabitants of America, the real proprietors of its soil is, without any exception, the most sinful story recorded in the annals of the human race. From what they have suffered from our hands, and the cruelty and injustice they have endured, the mind, accustomed to its own vices, is lost in utter astonishment at finding in the red man's heart no sentiment of animosity against us, no feeling of revenge; on the contrary, that our appearance at the humble portal of his wigwam is to this hour a subject of unusual joy. If the white man is lost in the forest, his cry of distress will call the most eager huntsman from his game; and among the tribe there

is not only pleasure, but pride, in contending with each other who shall be the first to render him assistance and food. But 'the red men,' lately exclaimed a celebrated Maimi cacique, 'are melting before the sun.' If we attempt to Christianize the Indians, and for that sacred object congregate them in villages of substantial loghouses, beautiful as it is in theory, it is a fact, to which I add my humble testimony, that as soon as the hunting-season commences, the men perish, or rather rot in numbers by consumption; while, as regards the women, it is impossible for any accurate observer to refrain from remarking that civilization, in spite of the pure zeal of our missionaries, by some accursed process, has blanched their infants' faces; and, under pretence of eradicating from the female heart the errors of a Pagan creed, it has implanted instead the germs of Christian guilt.

What is the origin of all this? Why the simple virtues of the red aborigines of America should, under all circumstances, fade before the vices and cruelty of the old world is a problem which no one among us is competent to solve. I have merely mentioned the fact, because I feel that before the subject of the Indians in Upper Canada can be fairly considered, it is necessary to refute the idea which so generally exists in England about the success attending the Christianizing and civilizing of the Indian; whereas I firmly believe every person of

sound mind in this country who is disinterested in their conversion, and who is acquainted with the Indian character, will agree—

1. That an attempt to make farmers of the red men has been, generally speaking, a complete failure.

2. That congregating them for the purpose of civilization has implanted many more vices than it has eradicated, and, consequently,

3. That the greatest kindness we can perform towards these intelligent, simple-hearted people is to remove and fortify them as much as possible from all communication with the whites.

It is impossible to beware of the white man, for it seems to be the instinct of his untutored mind to look upon him as his friend; in short, his simplicity is his ruin; although he can trap and conquer every beast of the field, yet he becomes himself the prey of his white brother.

For these reasons I am decidedly of opinion that Her Majesty's Government should continue to advise the few remaining Indians who are lingering in Upper Canada to retire upon the Manitoulin or other island in Lake Huron, or elsewhere towards the North West."

The Indian language is pleasing to the ear when spoken by a pretty squaw, although some of the *words and* sentences are very long. Take, for ex*ample, the Indian* for "Those are fine boys;" "Nah

wudj mindiddo woh ow kweewezains ewaidde dush." Fortunately for the emigrant here, it is not necessary for him to attempt to master this crack-jaw tongue, as the Indians in Canada invariably speak English. Small-pox and ardent spirits have greatly reduced the numbers of the red men in North America, and some of the tribes are nearly, if not wholly, extinct. Schoolcraft says, "Under the French Government they were liberally supplied with brandy; under the English with Jamaica rum; under the Americans with whiskey."

I believe the last to be the worst poison of the three, and it is a common saying in this country that a certain whiskey is warranted to kill at forty rods. During the war which the Americans were waging a few years since against the Sioux Indians, a Yankee suggested sending them some casks of bad whiskey, which would exterminate them at a much quicker and cheaper rate than the dragoons who cost annually many thousand dollars. Although a heavy fine is at all events nominally imposed upon persons giving or selling spirituous liquors to the Indians, yet this law, like many others here, is frequently set at defiance, and the Indian men may too often be seen maddened with drink; the squaws are no less fond of it, and indulge in it when an opportunity offers of doing so unknown to their husbands.

It is to be feared that little real good to this race, in a moral point of view, has yet resulted from the

efforts of our Government to ameliorate their condition, such as the building of schools and the granting of land; a thoroughly bad Indian has hitherto been, and may still be said to be, a *rara avis*; but, sad as it is to make the acknowledgment, it must be admitted that the fine traits of their original character are becoming gradually lost through their amalgamation with the white men, too many of whose vices they appear to have imitated along with the propensity to intoxication. Their manners are good, and even gentlemanlike; they have much natural intelligence, but are apt to be cunning and lazy withal. They lead a humdrum sort of existence, some trying agriculture, and some employing themselves in fishing, basket-making, and trapping, while a few of the cleverest among them act as guides during the season to those *sporting* gentlemen who hire Indians to kill ducks, deer, etc., for them, and boast, on their return, of the wonders "*I* have done with my gun."

As neighbours to our settlers, the Indians deserve to be highly spoken of; several farmers who resided near their settlements on Rice Lake have told me that they should never wish for better. They are by nature kind and obliging, particularly the squaws. Some of the half-bred girls are pretty when quite young; at thirty, they are generally old *and haggard*, owing, I suppose, to poor living and *exposure*. *All*, or nearly all, around me are Wes-

leyan Methodists, and I believe they are very attentive to their devotions in public.

I subjoin two of the Indian legends,* and these will suffice to convey a general idea of their style, which is rather remarkable for its absence of variety.

THE BOY WHO SET A SNARE FOR THE SUN.

THE ORIGIN OF THE KUG E BEEN WA KAG, OR DORMOUSE.

In the far-off time in which the animals reigned over the earth, they killed all the human beings excepting a girl and her little brother, and these two lived in fear and seclusion. The boy was a perfect pigmy, and never grew beyond the stature of an infant; but the sister increased with her years, so that the labour of providing food and lodging for both devolved wholly on her. She went daily to procure wood for her lodge, and took her little helpless brother with her, in order to protect him if possible from any untoward accident, for he was so tiny that a large bird might have flown away with him. She made him a bow and arrows, and said to him one day, "I will leave you behind here; you must hide yourself, and you will soon see the Gitshee-gitshee gaun, ai seeng (snow birds) come and pick the worms out of the wood which I have been chopping" (for it was winter time): "shoot one of the birds

* Adapted from Schoolcraft's "Indiana."

and bring it home." He obeyed her, and tried his utmost to kill one, but had to go home unsuccessful. His sister told him he must not despair, but renew his endeavours the next day, and accordingly she left him at the place at which she procured wood, and returned without him. Towards nightfall she heard his light footstep on the snow, and in he came, exultingly, throwing down a dead bird. "My sister," said he, "I wish you to skin it and stretch the skin, and when I have shot more birds I will have a coat made of the skins."—"But what shall we do with the body?" she asked, for as yet men had not begun to eat animal food, but lived on vegetables only.—"Cut it in two," replied the boy, "and season our pottage with one half of it at a time." She did so; and the brother, persevering in his efforts, managed to kill ten birds, of the skins of which his sister manufactured for him a coat.

"Sister," asked he one day, "are we all alone in the world? is there nobody else living?" The girl told him that those who had destroyed their relations, and whom they had so much reason to fear, dwelt in a certain quarter, and that he must by no means go in that direction. But her words only served to inflame his curiosity, and to excite his ambition; and soon after he took his bow and arrows, and sought the very spot against which his sister *had warned* him. After walking a long while with*out meeting* any one, he laid down quite tired upon

a knoll, where the sun had bleached the snow, and fell fast asleep. And the sun's rays beat so hot upon him, that they singed and contracted his bird-skin coat, so that when he awoke and stretched himself, he felt as if he were bound in it. He looked down, and seeing the damage done to his garment, flew into a passion, upbraided the sun, and vowed vengeance against it: "Do you think that you are too high?" said he. "Ah! I shall revenge myself."

On returning home he related to his sister the disaster that had befallen him, and lamented bitterly the spoiling of his coat. He would not eat; he lay down as one that fasts, and did not rise, nor even alter his position for ten days, in spite of all the girl's efforts to arouse him. Then he turned round and laid for ten days on the other side, after which he got up and told his sister to make him a snare, for he meant to catch the sun. She said that she had nothing of which to make it, but at length she recollected a piece of dried deer's sinew, left by her father, and from this she quickly manufactured a string suitable for a noose. But the moment she showed it to her brother, he told her that it would not do, but that she must procure something else. She again replied that she had not the wherewithal; but at last she bethought herself of her hair, and pulling some from her head, she converted it into a snare. But the boy said pettishly that neither would

this answer his purpose, and still he bade her make him a noose. She repeated her former assertions, and desired him to leave the lodge. When she was alone, she again took some of her own hair, and plaited it in such a manner as to form a tiny cord. She then called her brother and handed it to him. The moment his eye rested on this curious braid, he was delighted. "This will do," he ejaculated, and putting it to his mouth, he pulled it through his lips, and as fast as he drew it, it changed into a metal cord, which he wound round his body and shoulders till he had obtained a great number of yards. He then prepared himself, and set out a little after midnight, that he might catch the sun ere it should ascend into the heavens. He set his snare on a spot at which the burning orb of day would strike the land, as it climbed above the earth's disc; and, marvellous to relate! he caught the sun, which, being held fast in the cord, could not rise.

The animals, finding that daylight did not appear, were in a great commotion. They called a council, and one was appointed to cut the cord. This was a hazardous enterprise, as the sun's rays would burn those who approached them. At last the task was undertaken by the dormouse, at that time the largest animal in the world; and when it stood erect, it looked like a mountain. When the *dormouse* reached the place where the sun was *snared, its* back began to burn and smoke with the

intensity of the heat, and the upper part of its body was reduced to a heap of ashes. It succeeded, however, in cutting the cord with its teeth, and freeing the sun, but was itself reduced to a very small size, and has remained so ever since.

WA WA BE ZO WIN,
OR, THE SWING ON THE LAKE SHORE.

Once upon a time there was an old hag, who lived with her daughter-in-law and an orphan boy whom the latter was rearing. When the son came home from hunting, it was his custom to bring his wife the lip of the moose, the kidney of the bear, or some other choice bits of different animals, which she would cook crisp, so that when eating them a crackling sound would be heard. This kind attention of the hunter to his spouse excited the old woman's envy; and in order to possess herself of these luxuries, she finally resolved to make away with her daughter-in-law. To accomplish her purpose, she adopted the following stratagem:—

She asked the young woman to leave her infant son in the care of the orphan boy, and to go out and swing with her. She undressed herself, and fastened a leather strap round her body, and began to swing over the precipice. After a short time, she told her daughter to take her place; the latter obeyed, imitating exactly the example of the elder. When the swing was in full motion, so that it cleared the pre-

cipice at every sweep, the old woman slyly cut the cords, and the poor creature fell into the lake. The hag then disguised herself in her companion's clothing, returned home in the dusk of the evening, and feigned herself to be her son's lost wife. She found and nursed the child. The orphan boy asked her "where its mother was." "She is still swinging." "I shall go and look for her," he said. When the husband came in at night, he gave the coveted morsel to his supposed wife. He missed his mother-in-law, but made no remark. She eagerly devoured the dainty, and tried to still the child. The man looked astonished at her averted countenance, and asked why the infant cried so.

Meanwhile, the orphan had reached the sea-shore, and had discovered no traces of the lost woman. He returned, and while the old mother was without cutting wood, he mentioned his suspicions to her son, and told him all his thoughts. The man at once painted his face black, stuck his spear inverted into the earth, and prayed the Great Spirit to send lightning, thunder, and rain, in the hope that the body of his wife might rise from the water. Then he began to fast, telling the boy to take the child to play on the lake side.

After the young woman had fallen in, she was seized by a water-tiger, whose tail twisted round *her* body and drew her to the bottom, where she *found all things* ready for her reception, and became

his wife. While the children were sporting along the shore, and the elder one was casting pebbles into the lake, a gull emerged from its centre, flew to the land, and assumed a human form, in which he recognized the lost mother. She wore a leather belt around her loins and another of white metal, which was in reality the tail of her spouse the tiger. She said, "Come here with the child whenever he cries, and I will nurse him." The father accompanied them, and the gull again appeared, assumed her former shape, and began to suckle her little one. The man struck the chain with his spear, severed the links, and took the trio home with him. When they entered the lodge, the old woman looked up despairingly, and shook her head. A rustling was audible in the lodge, and the next moment she had fled forth, and was never heard of more.

CHAPTER V.

Trapping and other ways of taking animals in the backwoods, with hints to trappers, and some information as to the relative value of different furs.

The process of fitting out for trapping is by no means an inexpensive one. Bear traps are seldom used, being both costly and unwieldy; a bear was caught quite lately in a steel one, weighing about 140 lbs.; this he carried off bodily with the greatest ease, and was not captured until he had been followed a distance of five miles. Honey had been deposited in different spots in the vicinity of the trap, and heads of Indian corn strewn plentifully around. There are two sorts of bears in Upper Canada—the brown-nosed and the black; the latter being the larger of the two. Many of these animals are taken in New Brunswick by means of dead falls with weights sufficient to hold the bear, the weight required being from 700 to 900 lbs., and honey is the best bait. I was told by a Canadian that he had placed a gallon of molasses, mixed with the same *quantity* of whiskey in one of the sugar-making *troughs*, and thereby successfully enticed a bear to

drink of the intoxicating draught, which so stupefied him that he was easily despatched.

The Canadian bear generally retires to his winter quarters in the latter part of November, and emerges again in April. Last spring I observed numerous tracks as early as the first week in the month, the snow being then about eight inches deep.

Beavers abound in most of the backwoods of Upper Canada, and have been on the increase, as until the last few years they were not destroyed. For a long time the skins only fetched a mere trifle, about sixpence per lb.; when they were used in the manufacture of hats, they were worth from three to five dollars a pound; but when silk and other materials were introduced in their stead, they fell immediately, and at the present day they are sold at six shillings a pound. A large beaver in spring will weigh perhaps forty-five pounds, and its skin four and a quarter. By some persons the flesh of this creature is esteemed a delicacy, a taste in which I do not concur; however, the tail makes an undeniable soup, and a capital stew, which is one of the favourite dishes at an Indian feast.

The beaver is an easy animal to trap. On all the principal beaver-dams there is one part at which he crosses as he passes on his way to and fro to examine the other dams, or to collect food; and you should set your trap a little to the side of this track, and in the water where it is about five inches deep.

Make fast a stone, weighing some fifteen pounds, to the trap, and then attach to it a long piece of wood to float as a buoy. As soon as the beaver feels himself caught, he plunges into deep water, and the weight of the trap with the stone sinks and drowns him, while the floating buoy points out to the trapper the spot at which his prey is to be met with. It frequently happens that the beaver will break the float or buoy in two, which makes it difficult to find the trap; again, if the latter is not large enough, the little fellow will be caught by the toe, and will burst away. On the shores of the lesser dams you may often observe a small mound called a scent-hill, bearing a near resemblance to an ant-hill; the male deposits thereon some weeds or mud scented with castor,* as a token to the female where to meet him; opposite to this, and in the water as before, set your trap after the same fashion, and with the same precautions indicated above. The beaver-houses are often ten feet in height, and more than seventy in circumference at the base; they are constructed of sticks, sand, and mud, interwoven and intermingled so closely that it is almost impossible to break them apart, unless each piece is pulled out separately; the work of destroying one of these huts has taken me nearly a whole day. A man in my neighbourhood, quite a Baron Munchausen in

* *Castor (castoreum)* is contained in the glandulous pouches of *the male.*

his way, told me he had once killed a great number of beavers in the following manner:—He went with a good lantern and a club to a beaver dam, which he had broken away by day, and close to which he held the light as soon as it grew dark; when the beavers came to repair the damage, he slaughtered twelve in succession by knocking them on the head with his club. Many scents are employed to attract the beaver; the castor is, I believe, the best, and is often combined with rum. The Indians put great faith in this spirit mixed with cinnamon, while sassafras is warranted to draw a beaver for a mile. These allurements are kept a profound secret among trappers, but I suppose there is no harm in my divulging them here. The beaver skins should be stretched on a round hoop, and hung up to dry, the tails being in the first place cut off, and preserved for soup.

The beaver-dams are certainly wonderful pieces of mechanism; some of them are from ten to twelve feet in height, and from sixty to a hundred in breadth; they are formed of boughs, logs, and sticks interwoven together, with occasionally a large stone deposited here and there to prevent the stream from washing away the upper part, the whole being intermingled and plastered over with mud and clay. When commencing a large dam, the beavers will often turn the course of the water, to enable them to float the timber down to it. They generally

manage to fell a tree on the exact spot chosen by themselves; still it will sometimes happen that it falls the wrong way and upon a beaver, but this is not often the case, as a warning is given when the tree is about to descend. The size of some of the trees laid low by these animals is astonishing; I measured two white poplars more than three feet in diameter. The beaver brings forth from two to five young ones at a birth, and is three years in attaining maturity.

The fisher is very difficult to catch, being as wary as a fox. The best bait for him is a piece of the musk-rat, or of fish. When you have made yourself acquainted with his haunt, set your trap, well covered with moss or leaves, hanging your bait about a foot or eighteen inches above the pan; a spring-pole must be fastened to the trap, or the fisher would soon gnaw off his leg and escape; this contrivance is soon made by bending a pole over till it nearly touches the ground, then cut a notch in the side of a small tree, or hammer a peg into the earth, so that the end of the pole may bear against it. As soon as the fisher is caught he will struggle violently, and by his pulls upon the trap the spring-pole will be detached from the peg or tree, and your prey then hangs aloft in the air. In the season the fur of the fisher is worth from four to six dollars. In order to *get* off the skin, make an incision, commencing at *the tail, and* you will be able to turn it inside out;

it must then be stretched on a thin piece of board and dried.

The otter, again, is not very easy of capture. Where he frequents, he is in the habit of making what is called an otter slide, that is, the part of the bank where he slides down into the stream. This is readily to be distinguished, and exactly below where he drops, set your trap with the pan about three inches deep in the water. Be careful not to approach the spot afterwards, nor to touch anything near it, otherwise the otter will scent you, and will take good care to remain at a safe distance. Otters, when met with in the snow, are easily killed; from the shortness of their legs they are unable to run through it, and the progress they make by means of short jumps is necessarily tardy; hence they are quickly overtaken. The fur of the otter is more valuable than that of the fisher, commonly averaging from six to seven dollars. Both of these animals require for their capture a double spring-trap, and a very strong one.

We now come to the mink, at the present time the most valuable fur producer of Canada, in proportion to its size, with the single exception of the black fox; this last year a good mink skin being worth four dollars, and even more. There are several ways of trapping the mink; that usually resorted to is a steel trap, the size of an ordinary rat-trap, minus the teeth. Construct a small house,

oval in shape, and about a foot in diameter, by sticking pieces of wood into the ground at too narrow an interval to allow of the mink getting in between them except at the entrance; from this entrance build a passage about one foot in length, likewise of sticks, and sufficiently wide to admit your destined prey; at the mouth of the oval set your trap fastened by a chain, and covered with leaves, and at its extremity hang upon a stick, some six inches high, a small trout, a piece of fish, a red squirrel, or, better than all, a bit of musk-rat. Be patient, and the chances are that you will secure the mink a little sooner or later, by adopting this contrivance. As in the case of the fisher, spring-poles are often used with the steel trap to prevent the mink from decamping with the loss of a foot. Another method of catching the mink is with the dead fall, either by means of the ordinary figure of four, or by the even simpler contrivance of placing a piece of stick under the upright or support of the fall or cross beam; at the outer end of this stick the bait must be placed, and when the mink pulls at it, the stick turns round, slips from the upright, and the cross-beam falls on the animal's back.

I have myself tried, but without success, the following Yankee device, which, however, sounds ingenious:—Nail some boards perpendicularly round *the top* of an empty flour barrel, deposit your bait *at the bottom,* throwing in some moss, leaves, etc.;

then place your cask in an oblique position, so finely balanced that the additional weight of the mink will cause it to stand upright. When once in the cask, the height of the perpendicular boards will be too great for him to scale, and thus his capture is secured.

The mink must be skinned in the same way as the fisher, and the skin stretched as long as possible; if the inside is black it is not considered prime, and will not fetch half price. The fur is in excellent condition from October until the end of the winter; during the spring, which is the breeding season, it is of little value, and it is then illegal to trap the animal. The scent obtained from the male is the best wherewith to attract his fellows, but oil of rhodium and aniseed are also available. A resident not far from Toronto rears a number of minks, and annually sells their fur to the amount of £100; these creatures are easy to bring up, and become as tame as ferrets; a wire netting round the place of their confinement is a sufficient security against their escaping.

Of martens there are two species inhabiting these regions—namely, the pine and the stone marten. Their habits somewhat resemble those of the fisher, but they are very scarce, and but few have been taken in my part of the country. They are trapped in the same manner as the mink, but their skins are less valuable.

Foxes are very numerous; the cross fox is sometimes found, and occasionally a silver one. I have not heard of any black foxes being caught or killed in Canada for some years past, although some are said to exist a few miles further west. The skin of the common fox is worth about two dollars, that of the cross from four to ten, that of the silver about thirty, and the black fox skin has been sold for as much as eighty or a hundred dollars; robes made of this last being worn by the Imperial family of Russia on state occasions.

There are various modes both of enticing and of catching these animals. Some Indians have assured me that they could attract one close to them by imitating the squeaking of a mouse, and one told me that he captured foxes by putting a mouse into a tuft of grass with its head visible, and placing it on the pan of the trap, which must be covered with ashes and chaff; when the fox perceives the bait, he makes a spring and is caught by the leg. When the snow is on the ground, it is a capital plan to take one of Master Reynard's pads, and therewith to imprint a number of footmarks round the trap. Another device, and a very successful one, as I am informed, is to combine honey, assafœtida, and the corns from the inside of a horse's leg, and to smear the mixture over the trap, concealed as before by ashes, with the bait thrown around it; some, however, prefer to tie the bait to the pan. An old trap-

per imparted to me another method:—ascertain the point at which the fox is wont to cross the neighbouring stream, and in all probability there will be a stepping-stone whereon he puts his foot; remove this stone, and substitute a trap as nearly as possible resembling it in its place, and the chances are that the next time he passes he will step on it. It has been remarked by trappers that the fox dislikes wetting his feet.

There is rather a noted old character, in his way, partaking of the poacher, the genuine huntsman, and the earth-stopper, who manages, with the aid of half a dozen curs, to kill many foxes, by first running them to earth, setting a trap inside, and then stopping it up air-tight. The same individual once slaughtered a wolf, and carried it about with him to every house in the neighbouring town, until he had raised a considerable sum; for the dead body emitted such a dreadful effluvium that the people were glad to throw coin to the fellow to get rid of him and the carcase together. By this, and other schemes, he has managed to acquire some money, for he is now independent, and owns a comfortable farm, on which he and his faithful wife Bet* (a Bible Christian teacher) flourish: the old man, among his friends, with his dogs and his horn, seems as happy as a prince, especially when he can prevail on any one

* The faithful wife Bet died in January of this year.

to listen to his yarns about poaching, delivered in a strong Cornish dialect.

The musk-rat is caught with less difficulty than any of the furry tribe; out of the season the skin is worth little or nothing, but in the prime (the spring) it fetches about tenpence or a shilling. These creatures erect their houses in the fall of the year, at the edges of swamps, in beaver-dams, and on the land overflowed by rivers. Near their building or feeding-places may be observed their tokens on logs floating just above the surface; by these, score with an axe, or tomahawk a hole wide and deep enough to allow your traps (which should be made fast above) to be just under the water, and even with the log or timber on which the animals sit, and by this means you are sure of catching them. Another plan is to pull down a part of one of their dwellings, and set the trap near the entrance. The rat must be skinned, and the skin stretched in the same way as the beaver's. The Indians roast and eat the flesh, which they declare to be excellent—first taking out the small bags of musk which are found in different parts of the body, and which produce the best scent for enticing the living rats. They inveigle many by moonlight by counterfeiting their squeak, which is not unlike that of the house rat. The houses are made of grass and weeds piled up in the shape of an ant-hill, and some of them are very large.

I think that I have now mentioned most of the

fur tribe caught in the backwoods, with the exceptions of the wolf and the lynx, and a few others. Wolves abound in the unsettled townships; in a settled township the Government gives a premium of six dollars a head for each beast slain. The brutes are very cunning, and the only successful method of killing them, with which I am acquainted, is by destroying them with strychnine; small pills of fat, each containing three grains of this poison, strewn over the carcase of a deer or a horse, are pretty sure to prove fatal to them. The skin is worth about three dollars. One hears wonderful stories of these animals chasing adults, but I have never witnessed any such display of courage on their parts, and *I* believe them to be arrant cowards.

The lynx, or catamount, as it is called here, is not very common. It is an enemy to the lambs, and will sometimes attack a cow. A neighbour of mine, in Norway, on one occasion lost ten head of cattle through these beasts tearing the udders of the cows. The skin is not of much value; and as lynxes are very scarce, the trapper troubles himself but little about them.

The weasel and the ermine are caught in this country. The former is in great repute among Irish horse-doctors, who place it in the mangers of horses troubled with certain diseases, while some of the Irish ladies reckon it as a charm.

The skunk is one of the most beautiful little

animals in Canada; but woe to him who approaches too near to one caught in a trap, for the creature possesses the property of emitting by the movement of its tail the most offensive and fœtid stench, which will remain on the clothes until they have been buried in the earth for a long while. Among the Irish, skunk oil is supposed to be an antidote to rheumatism.

The marmot, or ground-hog, an animal that lives underground and feeds on clover, is harmless and comparatively worthless, although its skin is said to furnish good whip-thongs, and its carcase to be not bad eating.

Black squirrels are very numerous; the fur is serviceable for caps, and the flesh is excellent in curry.

The Canadian hare is about the size of the English rabbit, but has much longer legs, and in appearance resembles the mountain-hare of Scotland, in winter becoming white like the Alpine variety; it is caught by snaring with wire and a spring-pole, or by a deadfall made of the bark of the bass-tree soaked in salt and water—the brine inducing the animal to gnaw the bark. The skins are valueless, and so is the flesh, unless disguised in soups or stews.

I have now touched on the different methods of *trapping* the furry tribe, so far as my own experience goes. The trap for the beaver and the lynx is one

size larger than that for the otter and the fisher, and costs two dollars if only one is bought: the best sort is manufactured by "Newhouse and Co., Oneida Community," which words are stamped on the pan of all their traps. The next size (No. 3) is for the otter, fisher, and fox; and next in order is the mink trap, which will stand the purchaser in about five dollars the dozen from the same company. There are many imitations of these traps, but they are generally useless, as you cannot set them square and even, and the springs are constantly breaking in severe weather. There is a new invention in America, in which the springs are under the pan of the trap, thus occupying less room and exposing a smaller surface of iron. The big iron traps for capturing bears are dangerous and almost useless. The wolf trap is also larger in the jaws than that employed for the beaver, and more likely to secure its prey by catching him high up in the leg.

A trapper's outfit would be about as follows:—

	dol.	cent.
2 dozen mink traps . . .	10	0
1 „ beaver traps . . .	16	0
½ „ otter traps . . .	7	0
Tent	8	0
Canoe	7	0
Axe and tomahawk . . .	2	0
Carried forward . .	50	0

	dol.	cent.
Brought forward . .	50	0
60 lbs. of pork	2	50
60 „ of flour	1	75
2 „ of tea	2	0
Powder, shot, etc. . . .	4	0
A bake oven, pot, and frying pan .	2	0
	62	25

If the trapper has but a fair run of sport in the two months in the fall of the year, he ought to make, even if the skins do not realize the sums previously mentioned, one hundred and fifty dollars. I give a fair average, and quote from the accounts of two (not first-rate) trappers for this last fall:—

	dol.	cent.
Eighteen deer	76	0
Six fawns	12	0
Thirty-five beavers . . .	125	0
Twenty mink	60	0
Three otter	19	0
Forty musk-rat	10	0
2)	302	0
	151	0

The expenses in the second year would be very *small*, as the canoe, tent, etc., would last him a long *while, or he might* dispense with the latter by build-

ing a shanty. The autumn season for trapping and deer-hunting commences with the month of September, and closes about the second week in December; the spring season is from the end of March or beginning of April until the first week in May, when the lakes all open and the hum of the mosquitoes is heard; this is followed by the swarming of the black flies, and for some three weeks they render the woods quite unbearable, filling your nose, ears, and mouth, and blackening your face; it is labour in vain to sweep them off, as myriads are at hand to take their place, and continue the agreeable occupation of sucking your blood. Two or three years since these insects were in such numbers that many cattle were completely devoured by them, and a girl in the next shanty to the one in which I was living, returned from drawing water at about a hundred yards' distance with her face and throat in the same condition as if some thousand leeches had been applied to those parts. However, the black flies do not always amount to such a pest, though they are the greatest with which I am acquainted in Canada; and as fast as the land is cleared they vanish. During their season, keep your house dark, and you will not be troubled with them within doors. The mosquitoes, which remain until August or September, are nearly as bad.

I have never encountered any venomous snake in Upper Canada. I have heard of one rattle-snake

being seen, and report speaks of the existence of the puff-adder, but at all events it is extremely scarce. The garter-snake (harmless) is very common; and some of the rivers and swampy grounds abound in the black-snake, a hideous reptile, though also innocuous; it will sometimes measure six feet in length, and the thickness that of a man's wrist. The pigs are deadly enemies to the rattle-snake, so much so that the latter seems to have altogether disappeared.

Enough, I flatter myself, has now been said of trapping to enable the settler to commence operations in that line. I have not referred to partridge and duck shooting, as being the same all the world over. I may, however, mention that the partridge here (of the grouse species) flies up and roosts in the trees. Of these birds there are two sorts, the spruce and the common partridge; and further west you will find the quail, the wild turkey, and the prairie hen; the latter is to be seen in immense quantities, particularly in the States.

CHAPTER VI.

Fish and fisheries—The settler's occupations proper to each month in the year—Sleighs and sleighing.

A LITTLE information about Canadian fish, and the best ways of taking them, may, perhaps, be serviceable to the settler. Hooks are much cheaper in England than in Canada, therefore I should recommend him to bring out a good supply of different sizes. For the maskanonge (which much resembles the pike) large cod-hooks will be found to answer best, the trolling-hooks being generally too slight; but he will find the latter of use when two or three are soldered together, with a copper or brass eye at the end. Some large and small hooks for trout and bass, some eel-hooks with a bent eye in the shank, some of the smallest size for catching bait; also a few strong lines for mackerel, and a few fine ones for fly-fishing, will complete the necessary outfit in this department.

Many of the rivers and lakes are full of maskanonge, some of which weigh over fifty pounds. The usual bait for them is a spoon, either of silver, copper, or brass, according to the weather, the state

of the water, and the season; on a bright day, they generally prefer silver, and on a dark one, copper or brass. The boat is pulled at the rate of two miles and a half an hour, the line towing astern some thirty yards; the metal spinning round attracts the attention of the maskanonge, and numbers are thus caught in some waters. Many Yankees come here from the States for the sake of the sport in Rice Lake, a celebrated resort for fishing, shooting, and whiskey-drinking. Most of them despatch the fish they have secured to the markets in the States; while a few, both sportsmen and gentlemen, give away what they catch, and spend their dollars freely. The bass, which weighs from two to six pounds, is excellent eating, both fresh and salted; there are several species, of which the black is the best. It will often take the spoon-bait, and in July and August will bite freely at worms, clams, or the small cray-fish; with the first a boy took a couple of barrels full one day in the river Trent. In August and September excellent sport with this fish may be had with a white or yellow fly (the latter is preferable), tied on a hook, and towed slowly behind a boat.

Many sorts of trout are to be met with; the lesser streams and mill-dams, where there is good water, generally abound in the small speckled species, which are delicious eating; they have occasionally been caught weighing one pound and upwards. *In the* streams that run into the large

lakes, the salmon, salmon-trout, the lamprey, and the eel are plentiful. During the spawning season, many salmon are destroyed by spearing at night; and although this practice is against the law, no notice is ever taken of these nocturnal poachers. Some of the settlers near the Trent gain a livelihood by the sale of eels, so abundant are they in this as in the other large rivers. They are taken with night-lines, and average about 4 lbs. White fish, sturgeon, pickerel, and herring are captured in multitudes in Lake Ontario with gill and stake-nets, and near the shore with seines; while long lines are also used for salmon trout. Some of the farmers subsist chiefly by catching the white fish. A friend of mine in this neighbourhood often cures two hundred barrels during the season, each barrel being worth about seven dollars. The fresh-water herrings exceed their salt-water brethren in size, but do not equal them in flavour when cured.

There are very extensive fisheries of cod, ling, and mackerel, on the coasts of Labrador and Gaspé, which also swarm with shell-fish. I may remark, in passing, that the land in the Gaspé settlement is sold at a low rate, but I would not advise any emigrants to select that coast, for the soil is poor, and the winters are very long and severe, as some unfortunate Norwegians found to their cost three years ago, being nearly starved out. There are very good salmon rivers along the coast of the Bay of Chaleurs,

and also in the island of Anticosti, where a sportsman, who did not mind solitude and "roughing it" for a while, might vary his diversion by shooting bears, the only human inhabitants being the inmates of the lighthouse. But more of this anon.

I now propose to give a slight sketch of the occupations proper to each month in Upper Canada, thinking it may not be unacceptable to the newly-arrived settler.

January.—This is the coldest month in the year in these latitudes, the ground being covered with snow, and generally affording good sleighing. Lumbering will be going on at the shanties. You can also employ yourself in chopping for clearing land, and drawing fire-wood; thrashing your corn, and taking it to market. Also, while the snow is deep is the time to break in your colts, should you possess any; and if you are located near fishing-grounds, you can angle with worms, or spear fish through the ice.

February.—The same as in January, with the addition of splitting rails for fences, and preparing for sugar-making by getting troughs ready for containing the sap, and the boiling-pots carried on to the ground. Also spills for the sap may be made.

March.—Lumbering still. Most of the timber will now be drawn on the lakes ready for rafting as *soon as the* ice breaks up. During this month

there is some little appearance of spring, the trees beginning to show signs of budding. After the first thaw, commence your sugar-making; a sunny day and a frosty night will cause the sap to run. The spring season for trapping is from the end of this month, or the beginning of the next, until the first week in May.

April.—The frost begins to leave the ground, and the snow has nearly disappeared, except in the woods. You can generally plough in the middle of the month, and you should get your hotbeds in order for sowing quite early in May.

May.—This is a beautiful time here; the leaves are all out, the flowers are coming into blossom, and towards the latter end of the month the weather is generally very warm, the backwoods swarming with black flies and mosquitoes. The farmer must be busy sowing his grain; while the fisherman can amuse himself, by no means unprofitably, with fly-fishing or trolling for bass and maskanonge.

June.—Sheep-shearing usually takes place after the middle of the month; turnips should be sown, and tomatoes and capsicums planted out, in the beginning, unless you have already done that work in May. Cucumbers will be ripe in the hotbeds. Haymaking begins.

July.—Continue getting in your hay; the wheat harvest commences about the last week in this month. The young ducks are ready for the sports-

man; and most of the finny tribe, both in lakes and rivers, will bite freely.

August.—The wheat harvest is generally over before the end of the month, and the other cereals are ready for in-gathering, with the exception of Indian corn and buckwheat. Deer are in good condition, and fish take bait eagerly. The early apples are ripe. This is our hottest month.

September.—The best month for sowing fall wheat, harvest peas, and oats, and for fall ploughing; also for duck-shooting. Deer are in prime condition. Autumn trapping commences.

October.—Indian corn to be harvested; potatoes and turnips to be taken up towards the end of the month; the plough is at work throughout the whole of it. Asparagus beds to be covered. Onions to be pulled, and grapes to be gathered; also apples, pears, and other fruit. Venison in season. Trapping continues.

November.—This is a cold and windy time; the leaves are beginning to fall, and the general aspect of nature to assume a desolate appearance. You may commonly plough to the close of the month. Potatoes and turnips should be potted or housed. There is little rod-fishing, but plenty of trapping.

December.—The winter has fairly set in, though it often happens that there is no deep fall of snow before Christmas, and the weather will sometimes be *open and mild.* Now kill your pigs, and salt down

your pork for home consumption or sale. Pork sells commonly at about five dollars the hundred pounds. Drawing wood and threshing out grain are the principal employments of this month. Trapping ends with the second week.

Sleighing in Upper Canada lasts about two months, from the latter part of December until the end of February, on the roads bordering on Lake Ontario, which are not unfrequently bare of snow; but this mode of transit is of much longer continuance in the woods. The introduction of the snow-plough, used in Norway, and, I believe, in Lower Canada, might be effected here with little trouble, and less expense; it would greatly improve the sleighing, and also protract its duration. This plough covers about ten feet of ground, and makes a clear, smooth surface, hardening the snow, and tending to prevent its drifting, as it blows *over* the track thus prepared, and leaves a space sufficient for the passage of the sleigh, and sufficient likewise to admit of two sleighs passing each other; whereas, in Upper Canada, if your vehicle encounters another, one is obliged to plunge into the deep snow, which is not only unpleasant but apt to be dangerous. One team can, without difficulty, manage ten or twelve miles a day, and the cost of the plough itself would not be more than ten shillings. Indeed, its utility is so obvious that it is extraordinary the Government

should not have caused its adoption. It is illegal here, as elsewhere, to drive without bells, a set of which can be purchased at the stores for 7*s.* 6*d.* In the Lower Province I believe the sleighing is usually "in season" from November to March. The expense of a good cutter, *i.e.*, a pleasure sleigh, is about thirty dollars, and that of a double or lumber sleigh is a little more. In the backwoods the jumper, built by the backwoodsman himself, is in common use; the runners are made of ash or of iron wood, instead of being shod with steel. For lumbering and drawing timber there are the bobsleighs, which consist of two short sleighs hooked to one another, so that they can turn easily in a limited space. There is another sort of these indispensable contrivances in the States, somewhat after the style of a rocking-horse, the driver sitting astride as if on horseback.

There are few out-door amusements while the snow lasts; but I may except that of going down hill at a flying pace, seated on the Tabaugen (from the Indian "Tabernac"), a flat board turned up at the end. These Tabaugens are also very serviceable during the winter for carrying loads on the snow, enabling you to convey double the weight you could bear on your back, and with greater ease to yourself. I introduced the long Norwegian snow-shoe here, and it has afforded some amusement to the young *people; but it* is of little real use in these regions,

where there are no smooth fields or prairies to traverse, as in Norway, and where a rapid descent down a declivity is somewhat perilous, as you may chance to knock against a huge pine stump. In the towns the inhabitants have their skating rinks, curling matches, etc.; but in the country we have little or no diversion at any season; nothing but incessant hard work to gather in the dollar, and "go ahead." To the more thoughtful and cultivated minds, however, the magnificent aspect of nature, in her alternate mantle of the softest green and the purest white, is a never-failing source of pleasure.

CHAPTER VII.

THE MINERALS OF CANADA.

By the kind permission of the members of the Geological Survey, I am enabled to give the following catalogue of the minerals found in Canada:—

METALS AND THEIR ORES.

IRON.

Bog Iron Ore or Limonite.—Deposits of this ore, in greater or less abundance, are spread out in patches on the north side of the St. Lawrence, and between it and the foot of the Laurentide Hills, all the way from Ste. Anne des Plaines to Portneuf, a distance exceeding a hundred miles. In this area the ore seems to be most concentrated in the neighbourhood of the St. Maurice and Batiscan rivers; and iron has been smelted in the neighbourhood of Three Rivers for upwards of a century. The St. Maurice forges were established in 1737, and continued in operation until 1858. In 1831 from 250 to 300 persons were employed at the establishment; but the ore and wood becoming exhausted, and the *Radnor forges* having been erected in the Seigniory

of Cap de la Madelaine, on the Rivière au Lard, a tributary of the Champlain River, in a vicinity where the ore and wood are still abundant, the St. Maurice forges went out of blast. The ore with which the Radnor furnaces are supplied occurs close to the surface, in a multitude of patches distributed over the country, with a thickness of from three to twenty-four inches. It is brought to the furnaces partly by the workmen of the company, and partly by the various farmers on whose lands the ore occurs. The chief manufacture of the company consists of cast-iron car-wheels, the price of which at the forges is $2\frac{3}{8}$ cents per lb. A rolling mill has been erected at this establishment for the rolling of malleable iron of superior quality, such as scythe iron, the price of which is $3\frac{1}{2}$ cents per lb., and nail-rod iron, the selling price being $5\frac{1}{2}$ cents per lb.

The quartzose sandstone, used for furnace hearths, belongs to the Potsdam formation, part of the lowest group of the Lower Silurian series of rocks. Blocks of from twelve to fourteen inches thick, four feet long, and twenty inches wide, do not require renewal oftener than once in two years. The ore is washed at the smelting works, to free it from soil, and it then contains between 40 and 50 per cent. of iron. The quantity used annually is between 4000 and 5000 tons. The bog iron ore is found also in the Seigniory of Vandreuil and at St. Vallier, but it has never been worked.

The specimens contain about 50 per cent. of iron.

Red Hematite or Oligist Ore.—This is found in MacNab. There is an unworked bed of 30 feet thick, containing, by analysis, about 58 per cent. of iron.

In Sutton this ore yields from 20 to 50 per cent. of iron. It often contains a portion of titanium, as rutile, ilmenite, or sphene.

Magnetic Iron Ore.—Sutton: A bed of 12 feet thick, consisting of dolomite, abounding in small crystals of the magnetic oxyd of iron, which equals, in many specimens, about 56 per cent. of the mass, thus giving an iron ore containing about 38 per cent. of metal. Two other bands of dolomite run parallel with the one mentioned, all in the space of 100 yards, on the property of Mr. Oramel Stutson.

Marmora Iron Mine, Belmont, commonly known as the Big Iron Ore Bed of Marmora. It appears, however, not to be a single bed, but a succession of them (one measuring 100 feet in thickness), interstratified with thin bands of crystalline limestone and talcose slate, associated with diallage rock, serpentine, and epidosite. The breadth of the mass is eight chains. The ore contains between 60 and 70 per cent. of iron. Many years ago a furnace was erected at Marmora to smelt it, and iron of superior quality was manufactured. More recently, *different* companies have, for short periods, renewed *smelting* operations, with very satisfactory results

in respect to the quality of the iron produced; but the distance of the place from a shipping port has proved a serious obstacle to success.*

Newborough, S. Crosby: A bed of 200 feet thick in gneiss. It is situated on Mud Lake, a part of the Rideau Canal, and is the property of Messrs. G. Chaffey and Brothers, who mine the ore, and supply it at Kingston for 2¼ dollars the ton, to vessels which carry it as back freight to Cleveland, on Lake Erie; whence it finds its way to the smelting furnaces at Pittsburg, on the Ohio, in the State of Pennsylvania. About 4000 tons of the ore were thus exported in 1859.

Hull: A bed of about 90 feet in thickness. Messrs. Forsyth and Co. commenced mining this ore in 1854, for the supply of their own furnaces at Pittsburg. Up to 1858 they had exported about 8000 tons. It contains between 60 and 70 per cent. of iron.

Grenville: A bed about 10 feet thick in gneiss, on the property of Mr. Thomas Loughran.

* Since this report appeared, copper ore and lead ore combined with silver have been found in this neighbourhood, and the distance from a shipping port is now lessened, as a steamer can take the ore from Heely's Falls, a distance of only eight miles, up the river Trent, into Rice Lake, whence it can be conveyed by railroad to Coburg, on Lake Ontario. There is not capital enough in the country to carry out the speculation of renewing smelting operations on a sufficiently extended scale; if any English Company would try the experiment large fortunes might be made in a short time.

Grandison: A bed of about 20 feet thick in gneiss, on Government land.

Madoc: A bed of 25 feet thick in gneiss. The ore is very free from sulphur, and yields to analysis about 70 per cent. of iron; it is a natural magnet, displaying strong polarity.

South Sherbrooke: A bed of about 12 feet thick in gneiss. The ore contains between 60 and 70 per cent. of iron.

Hastings Road, north side: A bed in gneiss.

Ilmenite, or Titaniferous Iron Ore with Rutile.—St. Urbain, Bay St. Paul: A bed of 90 feet thick, which is exposed for 300 feet on the strike, and is traceable for about a mile. The ore has yielded to analysis—

Oxyd of titanium . . .	48·60
Protoxyd of iron . . .	46·44
Magnesia	3·60
	98·64

LEAD.

Galena, or Sulphuret of Lead.—Gaspé, Indian Cove: A vein which rises northward into a hill about 700 feet in height, constituting Gaspé promontory. The vein has a width of about 18 inches. About six tons of ore of 60 per cent. have been obtained from a trial shaft of twenty feet in depth.

Ramsay Mines, Ramsay: A shaft has been sunk on the lode to the depth of 37 feet, and the working

of 75 fathoms of ground, in 1858, yielded 26 tons of ore of 80 per cent. A smelting furnace has been erected, with a fifty-horse-power engine.

Lansdowne.

Bedford: The distance between the Lansdowne and Bedford lodes is about 25 miles; they bear for one another, and it appears not at all improbable that the veins in the two localities may be identical, or belong to one group. Though now abandoned, some of these are supposed to be still unexhausted; and two of them are known, at one period, to have yielded a great quantity of ore, one of them as much as 142 dollars worth to a fathom.

COPPER.

Sulphurets of Copper.—Escott, near Brockville: The ore from this bed has yielded 10 per cent. of copper.

Bruce Mines, Lake Huron: The main lode, which is worked with another of about the same thickness, is, on an average, from 2 to 4 feet wide. In a careful examination made in 1848, about 3000 square fathoms of these lodes were computed to contain about 6½ per cent. of copper. The quantity of ore obtained from the mine, since its opening in 1847, is stated to be about 9000 tons of 18 per cent. The number of men employed is thirty-four. The ores are in part sent to the Baltimore market, and in part to the United Kingdom.

Wellington Mine, Lake Huron: The lodes of

this mine are probably a north-westward continuation of those of the Bruce mine. The quantity of ore obtained by the West Canada Mining Company since 1857 is a little over 6000 tons of 20 per cent. In 1861, the quantity was 1175 tons of 19 per cent., and from the Huron Copper Bay Mine, 1300 tons, making the total quantity obtained in that year about 3000 tons. The number of men employed is 260. All of the ore raised by this Company is sent to the United Kingdom.

Acton Mine, Acton: The ore of this mine occurs in masses. In the first few weeks' work in 1859, about 300 tons of ore, containing nearly 30 per cent. of copper, were quarried, in open cuttings, from two of the masses, without making much apparent impression on the quantity in sight. The total quantity sent from the mine up to the end of 1861 is nearly 6000 tons, holding, on the average, about 17 per cent. of copper.

Upton Mine, Upton.

Bissonette's Mine, Upton.

Wickham Mine, Wickham: An experimental shaft has been sunk to a depth of about 5 fathoms; about 4 tons of 30 per cent. ore have been obtained from the excavation.

Yale's Mine, Durham.

Black River Mine, St. Flavien.

Harvey's Hill Mine, Leeds: The English and Canadian Mining Company employs about fifty hands.

St. Francis Mine, Cleveland.
Jackson's Mine, Cleveland.
Coldspring Mine, Melbourne.
Sweet's Mine, Sutton.
Craig's Range Mine, Chester.
Nicolet Branch Mine, Ham.

Garthby: This appears to be a large mass of iron and copper pyrites, running N.E. and S.W. In some parts sulphuret of iron prevails, almost to the exclusion of that of copper, while in others there is as much as 8 per cent. of copper. Some parts assume the aspect of what, among Cornish miners, is termed "bell-metal ore."

Haskell Hill Mine, Ascot: The quantity of ore obtained from the bed by five men in five months is about 100 tons, yielding 8 per cent. of pure copper. A vein on lot 17, range 7, of Ascot, within a mile of Sherbrooke, in addition to the yellow sulphuret of copper, has been found to hold traces of gold.

Native Copper.—Harrison's Location, St. Ignace Island, Lake Superior: The vein is about four or five inches wide, and holds masses of native copper, many of them weighing upwards of 100 lbs., accompanied by native silver.

Michipicoten Island, Lake Superior: The quantity of metal is equal to about 5 per cent.

Mamainse, Lake Superior: 450 lbs. of native copper in a single sheet, from a vein, was sent as a specimen to the London International Exhibition,

1862. Here are occasionally found the remains of Indian hammers, giving evidence of rude aboriginal attempts at mining many centuries since.

Smelted Copper.—Bruce Mines, Lake Huron.

NICKEL.

Sulphuret of Nickel.—Orford.

SILVER.

Native Silver.—Prince's Location, Lake Superior: The location is the property of the British-American Mining Company, and in a small trial shaft sunk by them, to the depth of between six and seven fathoms, on the mainland, where the lode is four feet wide, several hundred pounds of the vein contained 3½ per cent. of silver.*

GOLD.

Native Gold.—Fief St. Charles, Seigniory of Aubert de l'Isle: Nuggets found here, some of

* Extract from a newspaper of the 20th December, 1863:—"Evidence of the richness of the silver deposits on Lake Superior seems to be constantly accumulating. George Cummings has opened a vein this week on section 15, township 49, N. of range 26 W., . . . from which . . he brought in some 100 lbs. of extremely rich ore, some of the specimens weighing from 5 to 10 lbs., and almost pure. The ore is a bright steel colour, indicating a high per centage of silver. The vein, where the blasting was done, is about two feet wide. The richness with which the veins open is most astonishing, exceeding any deposits of the kind known before." Silver is reported to be found in the township of Lake Huron.

them weighing from 10 dwts. to 126 dwts., were sent as specimens to the London International Exhibition, 1862.

Various companies have made trials of auriferous drift in several places, one of the most important having been on the Rivière des Plantes; but of this it is not easy to procure authentic details. In 1851, the Canada Gold Mining Company commenced a trial of the drift along the Rivière du Loup, near its junction with the Chaudière, which continued three years. The following are the results for the years 1851 and 1852 :—

Area washed. Sq. acres.	Gold collected. dwts. grs.	Value. dols.	Wages. dols.	Profit. dols.
1851 $\frac{3}{8}$	2107·11	1826·46	1644·33	182·13
1852 $\frac{5}{8}$	2880·19	2496·69	1888·35	508·34
	4987·30	4323·15	3532·68	690·47

Seigniory of Vandreuil, Beauce: In the nugget of 80 dwts. with quartz, sent to the London International Exhibition, 1862, the proportion of the gold was 64 per cent.

Rapids of the Chaudière, parish of St. François (Beauce): In an analysis made by Mr. Hunt, in 1854, a portion of the galena separated by washing, but still containing a small mixture of the blende and pyrites, gave, by assay of 500 grains, 69 per cent. of lead, and 32 ounces of silver to the ton of ore. Another sample of 500 grains, more carefully

dressed, gave 37 ounces of silver to the ton. The silver contained a small quantity of gold. Another portion of 500 grains, of the sample which gave 69 per cent. of lead, afforded by cupellation a quantity of silver equal to not less than 256 ounces of silver to the ton.

PLATINUM AND IRIDOSMINE.

Native Platinum.—Grains of platinum and of iridosmine, in very small quantities, are met with among the drift gold of the Chaudière.

MINERALS APPLICABLE TO CHEMICAL MANUFACTURES.

Chromic Iron.—Mount Albert, Shickshock range, Gaspé: Found in masses, the largest weighing about 20 lbs.

Ham.

Bolton: The ore occurs in masses of from 50 to 1000 lbs. in weight.

Molybdenite, or Sulphuret of Molybdenum.—Quetachoo River, Manicouagan Bay, north shore, Gulf of St. Lawrence.

Cobaltiferous Iron Pyrites.—Elizabethtown, near Brockville: Assays of the ore have yielded one half of 1 per cent. of cobalt.

Dolomite.—In the eastern townships a vast quantity of dolomite occurs in bands, which are from 100 to 300 feet thick.

Magnesite, or Carbonate of Magnesia.—Sutton.

Bolton: The purest specimens contain 80 per

cent. of carbonate of magnesia, with a portion of carbonate of iron.

The most important application of this mineral is probably for the fabrication of a cement to resist the action of sea-water.

Petroleum, or Rock Oil.—Natural springs of rock oil have long been known in several localities in Western Canada. There are two in the township of Enniskillen. Wells sunk to a depth of from 40 to 60 feet, through the superficial clays, encounter a stratum of gravel, resting on the surface of the rock beneath, and often filled with oil, giving origin to what are called surface wells. Within an area of four square miles in the first three ranges of the township, there were supposed to be, in August 1861, about seventy wells, yielding more or less oil. Forty of these were surface wells. Some wells bored in July and August, 1861, are stated to have yielded from 400 to 500 barrels of oil in a week or two after having been opened. Two bored wells, belonging to Mr. Williams, yielded together, during some months, from 20 to 25 barrels (of 40 gallons each) daily. Wells bored to a depth of nearly 200 feet have yielded less oil than the surface wells.

In Pennsylvania the supply of oil from the flowing wells soon diminished, and eventually failed.

Tilsonburgh: Near the village of Tilsonburgh, in the township of Dereham, natural oil springs occur. In the townships of Zone, Mosa, and Orford, on the

banks of the Thames, oil springs abound for a distance of four miles. The oil-bearing limestone underlies an area of 7000 square miles in Western Canada.

Bituminous Shale.—Collingwood.

Works were erected in 1859 by Messrs. Pollard and Macdonell, consisting of 24 retorts, capable of yielding about 250 gallons of oil daily, by the distillation of from 20 to 30 tons of shale. The cost of the crude oil was 14 cents (about sevenpence) the gallon. The works have been repeatedly destroyed by fire, and are for the present abandoned.

Phosphate of Lime (*Apatite*).—North Elmsley.

South Burgess: The deposit of phosphate of lime seen in North Elmsley, appears to be continued south-westwardly through Burgess.

REFRACTORY MINERALS.

Soapstone (*steatite, compact talc*).—Bolton.

Sutton.

Potstone (*compact chlorite*).—Bolton.

Mica.—Found in Grenville, and North and South Burgess.

Plumbago, or Blacklead.—Pointe du Chêne Graphite Mine, county of Argenteuil.

Lochaber: The workable beds which have been observed, are chiefly in various townships on the north side of the Ottawa.

Asbestus.—Generally a fibrous serpentine or chrysotile, which occurs in veins cutting the serpentine of the eastern townships.

Friable Sandstone.—Used to protect the sides and bottoms of furnaces in iron foundries.

Fire-clay.—In Mr. Gartshore's foundry at Dundas, this clay has entirely superseded the fire-clay formerly imported from the United States.

MINERALS APPLICABLE TO COMMON AND DECORATIVE CONSTRUCTION.

Limestones.—Amprior, MacNab.

Cornwall.

Montreal.

Chevrotière.

The quantity of stone annually quarried in the vicinity of Montreal is over 90,000 tons.

The produce of the quarries of La Chevrotière has a deserved celebrity in Quebec, where it has been used in the construction of churches and other buildings.

Dolomites, or Magnesian limestone.—Owen Sound.

Noisy River Falls, Nottawasaga.

Rockwood, Eramosa.

Guelph.

Oxbow, Saugeen River: This is the best dolomite which has been discovered in the country. It resembles the Caen stone in the facility with which it can be worked.

Sandstones.—Lyn, Elizabethtown.

Nepean.

Quin's Point, Seigniory of La Petite Nation:

This stone has been used in the construction of the Parliament buildings at Ottawa.

Pembroke.

Hamilton, Barton.

Georgetown, Esquesing: The stone from here has been used in constructing culverts on the Grand Trunk Railway, and numerous buildings in Toronto.

Nottawasaga, and other places.

Labradorite.—The opalescent variety of Labradorite occurs in cleavable masses in a fine grained base of the same mineral character, which forms mountain masses. Where these are thickly disseminated in the paste, the stone becomes a beautiful decorative material, applicable to architectural embellishment, and to articles of furniture. It is worked at a cost beyond that of marble, but not greater than is proportionate to the superior beauty and durability of the material.

Gneiss.—St. Charles Reservoir, Jeune Lorette: This stone has been used for building the dam and reservoir of the Quebec Water-works, on the St. Charles River. Masses of almost any size can be blasted out from the rock, and large blocks have been dressed and applied to the masonry work of the reservoir, which will, no doubt, prove a structure of the most lasting character.

Syenite.—Grenville.

Barrow Island, River St. Lawrence, opposite Gananoque.

Granite.—St. Joseph, Beauce: This band of granite has been used for millstones, and would yield a strong and durable building stone.

Barnston, and other places.

MARBLES.

Limestones.—Arnprior: Light and dark grey marble.

Elzivir: White marble.

Grenville: Yellowish-white marble.

Augmentation of Grenville: Spotted green and white marble.

St. Armand: White marble, and black marble.

St. Joseph, Beauce: Red marble, veined with white.

Caughnawaga: Grey marble, and grey with red spots.

St. Dominique: Dove-grey marble.

L'Original: Grey marble with white spots.

Pointe Claire: Brownish black, and greenish black.

Cornwall: Black marble.

Pakenham: Brown marble.

Gloucester: Brownish grey marble.

Montreal: Grey marble.

Dudswell: Cream white marble.

Serpentines.—Orford: Dark green serpentine, and dark green striped with light green.

Melbourne: Green and white.

St. Joseph, Beauce: Green, veined with white.

These rocks, or others immediately near them, contain the metals iron, lead, zinc, copper, nickel, silver and gold; with the drift gold, derived from these strata, are found platinum, iridosmine, and traces of mercury.

SLATES, FLAGSTONES, LIME, BRICKS, AND DRAIN TILES.

Roofing Slates.—Walton Quarry, Melbourne: Mr. Walton commenced opening a quarry in 1860, and found it necessary to make a tunnel through the serpentine. The cost was 30,000 dollars. Up to a comparatively recent period, the usual coverings of houses in Canada have been wooden shingles, galvanized iron, or tin-plate; but so many destructive fires have occurred from the use of the first of these, that they are now interdicted in all large towns. Slate, as a covering, costs about one-third more than shingles, but one-half less than tin, and one-third less than galvanized iron. In the following table are shown—1st, the sizes of the slates, in inches; 2nd, the number of such slates in a square (of 100 square feet); and, 3rd, the price per square at which Mr. Walton supplies his slates, placed on the rail-road cars at Richmond, which is within a mile and a-half of the quarry.

Sizes.	Number.	Price.	Sizes.	Number.	Price.	Sizes.	Number.	Price.
24×16	86	$4 00c.	20×10	169	$4 00c.	14×10	262	$3 00c.
24×14	98	4 00	18×11	175	4 00	14× 9	291	3 00
24×12	114	4 00	18×10	192	4 00	14× 8	327	3 00
22×12	126	4 00	18× 9	213	4 00	14× 7	374	2 75
22×11	138	4 00	16×10	222	3 75	12× 8	400	2 75
20×12	141	4 00	16× 9	246	3 75	12× 7	457	2 50
20×11	154	4 00	16× 8	277	3 60	12× 6	533	2 25

To show that slate, as a covering, is well adapted to resist the influences of a Canadian climate, it may be stated that slates from Angers, in France, have been exposed on the roof of a building in Montreal for upwards of 100 years, without any perceptible deterioration.

Slate for roofing is also found at Orford, Tring, Kingsly, Cleveland.

Flagstones.—Georgetown, Esquesing: A hard, fine-grained sandstone, which can be split into flagstones. They are used at Toronto and Hamilton.

Hydraulic Lime.—St. Catherines.

Formerly the quantity of cement manufactured, during the construction of railways and other public works, averaged 80,000 bushels annually; the quantity made now does not exceed one-tenth of the amount. The price now is about a shilling per bushel of 60 lbs.

Walkerton.
Limehouse.
Nepean.
Rockwood.
Magdalen River.

Common Lime.—Guelph: The stone occurs here in unlimited quantities.

Walkerton: This remarkably white lime makes a superior whitewash, and a strong cement.

Montreal: This limestone yields the best stone for building purposes, and also burns to excellent lime, of which 270,000 bushels per annum are manufactured at Montreal at 16⅔ cents per bushel.

Common Bricks.—Owen Sound.

Walkerton, Brant.

St. Jean, County of Lotbinière.

Montreal: Messrs. Peel and Compte manufacture 6,000,000 common bricks annually, which are sold at from 5 to 6 dollars per 1000. The red bricks of Montreal are manufactured from a blue clay of marine origin, as is proved by the occurrence of sea shells; all probably the same as species now inhabiting the ocean. The remains of the capeling (*Mallotus villosus*) and the lump-sucker (*Cyclostomus lumpus*) are obtained from the same clays near Ottawa. In one of Messrs. Peel and Compte's pits has been found a nearly entire skeleton of the Greenland seal, a species still living in the Gulf of St. *Lawrence;* from the size of the head, the animal

appears to have been six feet long, and full grown.

The quantity of bricks manufactured by Messrs. Bulmer and Sheppard is equal to 6,000,000 per annum. In this manufacture they use Boaden's brick-making machine.

Toronto: The deposit of clay extends eastward, at least as far as Cobourg. The average annual manufacture of all kinds of bricks is from 8,000,000 to 10,000,000. The price of common red bricks is from 3 dollars to 4 dollars per 1000.

Drain Tiles.—North Plantaganet: Tiles are manufactured by Mr. Thomas Gibb, at Treadwell, from a blue clay, which forms a considerable deposit on the banks of the Ottawa. The price of them is 10 dollars per 1000.

Quebec: Tiles made by Messrs. W. and D. Bell are used for main sewers and house drains in the city of Quebec, where 151,000 of them have been laid.

GRINDING AND POLISHING MINERALS.

Whetstones.—Stanstead.
Hatley, Massawippi Lake.
Bolton.
Kingsey.
Collingwood.
Nottawasaga.
Madoc.

Hones.—Ottertail Lake, Thessalon River.

Grindstones.—Nottawasaga: Considerable numbers of grindstones are made by hand here, and in the township of Mulmur, and are declared by practical men to be superior to those imported. A lathe for turning them could be erected for about £200 sterling.

Millstones.—Grenville.

Cayuga, north of Talbot Road.

Millstones for grinding oats and barley are manufactured by Mr. W. De Cew, of De Cewville, in the county of Haldimand.

MINERAL MANURES.

Gypsum.—Oneida.

York, Grand River.

The following is the amount of gypsum raised annually from the quarries on the Grand River:—

T. Martindale, Oneida . .	3500 tons.
F. Donaldson, Oneida . .	1500 „
A. Taylor, York . . .	3000 „
Thompson and Wright, Paris	4000 „
F. Brown, Cayuga . . .	2000 „
	14,000 „

The greater part of this gypsum is used for agricultural purposes, and the prices at which it is sold are as follows:—

Plaster, unground	. . .	$2 per ton.
„ ground for the land	.	$3 to $4 „
„ „ „ stucco, raw	.	$5 „ $7 „
„ „ „ „ calcined		$16 „

Fresh-water Shell Marl.—New Edinburgh.
Sheffield.
Montreal.
Nepean.
West Hawkesbury.
Brant, north of Durham Road.
Carrick.
Bentinck.
Anticosti.
Belleville.
St. Armand.
Calcareous Tufa.—Noisy River Falls.

MINERAL PAINTS.

Iron Ochres.—Ste. Anne de Montmorenci.
Cap de la Madelaine.
Pointe du Lac.

In 1851 Messrs. H. A. Monroe and Co., of New York, made arrangements to prepare the ochres for sale. The prevailing colours are red and yellow, but there occurs also in some parts a beautiful purple ochre, and in others a blackish brown. From these natural tints, eight colours are said to have been prepared. The deposit being but little mixed with sand, the chief impurities consisted of the roots

of those plants which had been growing on the surface. The blackish brown variety, when purified from roots, without fire, is sold under the name of raw sienna; when subjected to fire, it assumes a brown of less intensity, and is sold as burnt sienna.

Nottawasaga.

Owen Sound.

Sulphates of Barytes.—Burgess.

Lansdowne.

In Canada this mineral is as yet applied to no use, but in some parts of the United States it is refined and ground in large quantities, for use as a paint, and also for adulterating white lead. The value of the crude barytes suited for such a purpose is about 10 dollars per ton, while the wholesale price of the paint is 30 dollars per ton.

MINERALS APPLICABLE TO THE FINE ARTS.

Lithographic Stone.—Marmora: One of the beds, which is two feet thick, and of impalpable grain, is a lithographic stone of excellent quality. The band to which the bed belongs extends from Hungerford to Rama, a distance of 100 miles; but though the stone has been highly commended by all the lithographers who have tried it, no one has attempted to quarry it for use.

Brant.

Oxbow, Saugeen River, Brant.*

* Splendid lithographic stone is also found on the Burleigh Road.

MINERALS APPLICABLE TO JEWELLERY.

Agates.—Michipicoten and St. Ignace Islands, Lake Superior.

Labradorite.—Grenville.

Abercrombie.

Albite (*Peristerite*).—Bathurst.

Orthoclase (*Perthite*).—Burgess.

Jasper conglomerate.—Bruce Mines, Lake Huron: This beautiful rock consists of white quartzite, in which are imbedded a multitude of blood-red jasper pebbles, which constitute a material fit to receive the work of the jeweller. The whole rock is capable of being applied to the manufacture of vases and such like articles of *virtù*. Many boulders of the rock lie scattered along the north coast of Lake Huron, and they are abundant at the Bruce Mines.

Epidosite.—Shickshock Mountains: This green rock occurs in massive beds, and extends over considerable areas in the Shickshock Mountains, on the south side of the St. Lawrence, in Gaspé.

MISCELLANEOUS MINERALS.

Feldspar.—Bathurst.

Sandstone for glass-making.—Williamstown, Beauharnois.

Moulding Sand.—Dundas.

Owen Sound.

Durham.

Peat.—Chambly.

Peat occurs near Chambly, on the south side of the St. Lawrence, and was some years ago cut, pressed, and sold as fuel by the late Mr. Scobell. As Canada is deficient in coal, when wood becomes scarce in the progress of settlement, peat will gradually assume some importance as a fuel in many parts of the country. It occurs in great abundance in many places in the province; about 100 square miles of it extend along the south front of the Island of Anticosti.

I must now bring this catalogue of minerals to a close, believing that I have given the settler sufficient information to guide him to the different localities in which they are to be found, and where he may obtain a chance of employment, and perhaps even of making a fortune. For fuller particulars I refer my readers to a work published in Canada by the Geological Society.

I subjoin, also by the permission of the members of the Geological Survey, a short description of the crystalline rocks of Canada:—

CRYSTALLINE ROCKS OF CANADA.

Rocks of the Laurentian System.—The rocks of this system are the oldest known on the globe, and are widely spread in North America, where they are traced from the coast of Labrador to Lake Huron, and thence northward to the Arctic regions. They consist in great part of orthoclase gneiss, with

quartzites, sometimes conglomerate, and crystalline limestones and dolomites. The total thickness of these strata is estimated at not less than 20,000 feet. Besides these, there is a great formation of anorthosite rocks. In the Laurentian System there is an absence of anything like argillite or clay-slate. In the gneiss and limestone series, the beds are chiefly of magnetic and oligist iron. In the anorthosites the only ones met with are beds of titaniferous iron or ilmenite.

Rocks of the Huronian Series.—These rest upon those of the Laurentian System, and are in part made up of the ruins of the latter. The series is met with at Lake Temiscaming, on the Ottawa, and on Lakes Huron and Superior. Its thickness on the north shore of Lake Huron is supposed to be 18,000 feet. There is but a small amount of carbonate of lime in it, and also an absence of gneiss. Quartzite may be said to be the predominant rock in the Huronian Series. Its colours are white, grey, brownish, and sometimes greenish or reddish. These quartzites often become conglomerate, from the presence of various coloured pebbles of quartz and jasper. The latter are frequently blood-red in colour, and being imbedded in a white or a greenish base, constitute a very beautiful rock.

Rocks of the Silurian Series.—The Notre-Dame and Shickshock Mountains are the N.E. prolongation of the great Appalachian chain, which extends

from the Gulf of St. Lawrence nearly to the Gulf of Mexico. They attain, in some places, a height of more than 4000 feet above the sea. They consist of gneiss, anorthosite, diorite, epidosite, garnet-rock, mica-rock, mica-schist, argillites, chlorite, magnesite, dolomites, and limestones, sandstones, etc., etc.

Intrusive Rocks.—The results of recent geological investigations in various parts of the world, lead to the conclusion that many rocks, formerly regarded as intrusive or exotic, are really sediments, altered *in situ*, or indigenous rocks. Such is the case with many granites, syenites, greenstones, amygdaloids, porphyries, and serpentines; all of which are represented among the altered strata of Canada. These sediments at the time of their metamorphism were, however, in such a plastic state that they were sometimes displaced and forced among the overlying and disrupted strata. Intrusive masses, so far as known, are extremely rare in the Laurentian System, except in one small area in the counties of Grenville and Argenteuil. To the S.E. of the Lower Silurian Mountains, and to the N.W. along the valleys of the St. Lawrence and Lake Champlain, are a series of intrusive rocks, the more characteristic varieties of which are quartziferous porphyry, trachytes, phonolite dolerite, and peridotite.

CHAPTER VIII.

Country taverns—Backwoods verses—Lumbering and lumber-men—The old cook—Mormonism and Mormons — Sects—Camp meetings.

In most of the small villages in Canada the traveller will find two taverns, where he may have breakfast or dinner for a shilling English, and may occasionally procure a glass of tolerable beer. Strong green tea is the beverage at every meal, black being rarely taken. The whiskey at these country inns is generally of the cheapest and also of the worst description, yet on the whole preferable to, and less injurious than, the rum and brandy made from it, and only to be known by some decoction added to each liquor to give it its distinctive flavour. At almost every public-house on the road you will see two or three blear-eyed, unkempt individuals, keeping an eye on the too tempting bottle at the bar; these are tavern-loafers, who live and die on whiskey hanging about the place, chopping wood when sober enough, or watering the traveller's horse. The bill

of fare is pretty good; broiled ham, pumpkin pie, and tea, with occasionally some fresh meat in the season; but fried pork and "sarse" is the ordinary dish among the lower orders, the sarse being the fat in which the pork is fried. As a *delicacy*, you are sometimes treated to molasses, called here "lasses fixings," and a pumpkin or apple tart finishes the repast.

The lower classes in Canada are miserable cooks, worse even than in England; and but little variety in the culinary department, such as made dishes or similar luxuries, prevails among the gentry. It is a common custom with the latter to have a sheep killed at noon, and to dress part of it for the day's dinner; and the same plan is pursued with turkeys and fowls, thus ensuring their tenderness, as I was informed by a young lady whom I questioned on the subject.

On the first occasion of my passing the night at a small village tavern in Upper Canada, it was intimated to me by the landlord, quite as a matter of course, that I was to share the sleeping accommodation already occupied by a wandering Italian with his hurdygurdy; and on my dissenting from this arrangement, mine host was not only irate, but evidently astonished. However, after a little trouble, I succeeded in inducing him to give me a shake-down on the floor. The general amusement at these taverns is card-playing, varied now and then by a

hoe-dance. Never shall I forget one of these entertainments, which took place on the 5th of November. I had just returned, tired and wet through, from the backwoods, and on my asking for a bed, the landlord (an Irishman) informed me that there was to be an evening party, and that he feared it would prevent my having much sleep. Nevertheless, I crept quickly to my couch in a small hole at the top of the house before the arrival of the guests, but all in vain! It was an Orange jubilee, and about seven o'clock three fiddles struck up, the dance commenced, and ended not until seven the next morning; the shoutings and yellings exceeded anything I have ever heard, and I need hardly add that Morpheus was a stranger to my pillow. No charge, however, was made to me for that night's unrest. One of the company was quite a poet in his way, and he favoured the rest with the following song of his own composition, which I subjoin for the reader's benefit, leaving him to judge of the merits of this bard of the backwoods:—

"Tell me, oh! where is your star-spangled banner,
That you swore would 'lick all creation in fits'?
Is it daub'd in the mud of the Southern Savannah,
Or torn by the South into wee little bits?

"Have your stars ceas'd to shine, your eagle ceas'd flying,
The bald-headed eagle—that scavenger bird?
Have your people ceas'd boasting, and nations defying?
Was fighting or flying at Bull's Run preferr'd?

"Yes! the bald-headed eagle your Franklin* pronounc'd
Is the meanest of birds flying under the sun;
He perhaps hover'd over you when you were trounc'd
That glorious day at immortal Bull's Run.

"That star-spangled banner shall blazon no more,
And the bald-headed eagle his prey must disgorge;
While the stout British lion shall prevail as of yore,
While proudly still triumphs the flag of St. George!"

The lumber-men lead rather a jovial sort of life in the shanties, which it is customary to build far away in the backwoods, and close to the spot on which the timber is to be cut. These fellows are mostly a rough, wild, heterogeneous set—French from Lower, English, Scotch, and Irish from Upper Canada, often with a half-nautical element in their composition. Their pay is from ten to fifteen dollars a month, but those who hew the timber with the broad axe have from twenty to thirty, and sometimes more. Each gang of some half dozen men are under a "boss," whose wages are rather higher than theirs. The shanties are well supplied with provisions, such as salt pork and beef, potatoes, and molasses, and tea is drunk *ad libitum*. Fat pork is the especial glory of the lumber-man, who will frequently turn out of his bunk three or four times in the night to devour a lump of it, qualified with a

* Franklin says that the bald-headed eagle is a mean scavenger bird and a coward, and regrets that his countrymen should have adopted it as their national emblem.

draught of tea. Breakfast is over by daybreak, and all hands are off into the woods till noon, when they return to dinner, consisting of pork and peas-soup; then they work till dark, and after supper the fiddle strikes up, and the evening concludes with a song and a game of chequers.

The timber is drawn on sleighs or floated down to the back lakes, thence to Lake Ontario, and thence to Quebec; about six or seven weeks are occupied in the entire transit. The lumber-men, of course, need provisions and hay, so the settlers can usually find a profitable market for their goods. Lumbering has been on the whole a flourishing trade, and the men have soon made fortunes, though in bad times they have also lost them. In one of the shanties in which I stayed, the boss was a broken-down pawnbroker from Belfast, and in another the cook had been in two of Sir John Franklin's expeditions. He naturally had many anecdotes to relate of perils and adventures, both grave and gay. One was to the effect that, after Sir John's return from one of his voyages, he and his crew were walking on Tower Hill, when, in passing an inn, his cocked hat was seized and borne off by a young lady of decidedly questionable character, and two days afterwards it was seen exposed for sale at a pawnbroker's opposite. Many were the hardships that old Mackenzie had endured: once he curried a dog's head as a reserve supply for nearly a fort-

night, and he assured me that stewed mocassins were not so bad after all. The poor fellow was in rather reduced circumstances, the Government having promised him a lot of land which he had never received.

Chancing one day, when in the backwoods, to enter a nice clean shanty, decorated with paintings of different lands, I found that the owners had been Mormons, and that they had been long since in company with Brigham Young. Mr. and Mrs. Jones were intelligent people, and she must have been very good-looking in her younger days, when the prophet fell in love with her. From her I learned some interesting particulars of the sect, and most of her stories tally with those in Mrs. Ward's book, called "Life among the Mormons." Some years previous to my making her acquaintance, Mrs. Jones had been travelling as lady's-maid with an Irish family, who were crossing the Rocky Mountains on their way to Utah, with about fifteen hundred Mormons, under the appellation of "The Hand-barrow Company." From her account, these poor deluded wretches must have suffered terrific hardships, most of them dying on the road of starvation; indeed, the scenes she depicted to me were no less horrible than those described by Josephus as having been witnessed during the siege of Jerusalem. To such extremities were these wretched beings reduced, that women ate their own children, and not

more than one hundred out of the whole number survived to reach the promised land.

I have a shrewd suspicion that on Mrs. Jones's arrival at the Great Salt Lake, she was almost immediately promoted to the honour of inhabiting the palace of the prophet, who at that time mustered about a hundred and seventy wives, with an innumerable offspring. Each wife has two rooms allotted to her, and more, should her family increase largely; all are obliged, as far as outward appearances go, to live on good terms with one another, but the misery of the women in Utah is not to be told; once there, they are in fact prisoners for life, at all events they cease to be free agents, unless they can manage to effect their escape like Mrs. Jones, and a few others; but this is next to impossible, for the "minute men" are always on the alert, and ready to start at a *minute's* notice (hence their name), and daily communication with every part of the country is kept up.

Mrs. Jones, with a female companion, once made an unsuccessful attempt on horses to elude their master; they rode day and night, but were captured and taken back to Brigham Young, who put them in prison, where they were kept in close confinement for two months, and were then released on their making professions of repentance. Mrs. Jones enjoyed the reputation of being a skilful doctor among the ladies, and so had many oppor-

tunities of going about and learning the private affairs of this extraordinary community.

There are several different degrees among the Mormon religionists, and each has its secret tribunal or star-chamber, before which any offender is tried, and, if found guilty, is condemned to the shades below; he disappears from off the face of the earth, and no further inquiries are made after him—at least, so I was assured by Mrs. Jones. As soon as any one arrives at U*tar* (thus she pronounced it), the neophyte is inveigled to purchase something valuable, and to part with all his money, as being useless to him in his new abode; when the bargain is concluded, the unlucky wight discovers all too late that his acquisition, as he deemed it, is the property of the Mormon sect. Every Mormon has to contribute a certain portion of his earnings per month, *nominally* towards the support of immigrants; altogether, it is not difficult to account for the prevailing notion that Brigham Young is the richest man in the world. Mormonism is at present still on the increase, and its votaries have agents in all regions of the globe. A magnificent country and splendid cities are theirs, and they manufacture all their implements of war and of husbandry, their internal resources thus rendering them independent of other people. Provisions for ten years are laid up in the great city, and from their position they can defy an invading army. When the Americans

sent a force against them, they captured all the provisions of their unwelcome visitors, and seized their trains, so that the Yankees were glad to make off. Indeed, it was wonderful that they were in a condition to do so, for the Mormons had poisoned all the waters; but my informant told me that the secret was divulged to one of the American soldiers by a freemason.

The way in which Mrs. Jones did at last effect her escape was by joining with about twenty others, all pretending that their intention was to settle in some other part of the State; and so they set off, taking with them articles of household furniture, babies' cradles, and everything that might tend to disarm suspicion. They travelled several miles, guided by one of the band, who had formerly been an interpreter to the Indian tribes, and was acquainted with a short cut to the Yankee territory. Having burnt their incumbrances, they made post-haste and got clear of the Mormon country just as they were on the point of being overtaken by the minute men—indeed, a few in the rear were captured. An unsuccessful endeavour to abscond by a man is mostly punished with death by shooting; a woman is carried back again to Utah to obey the dictates of Brigham Young as his wife, or as that of some ancient elder. A large Mormon settlement is now in course of formation near Chatham in Canada West. There can be no doubt that Young is a very

clever fellow, and Mrs. Jones speaks of his behaviour as being gallant. I understand that Smith junior proclaims himself to be the true prophet, and should war break out between these two rogues, Mormonism will in all probability be shattered in the conflict. It must fall to the ground sooner or later, and the most likely period would seem to be that of Brigham's death, when an awful scene must ensue. But enough of this disgusting and yet wonderful people.

As before mentioned, besides Episcopalians, Presbyterians, and Roman Catholics, a great diversity of religious sects exists in Canada. Bible Christians, Baptists, Congregationalists, Quakers, Wesleyans, etc., etc.; the latter being the most numerous class among the dissenters. Some of the congregations appear to be very pugilistic in their tendencies; I lately read an account of a fight in a Bible Christian meeting-house, in which one member broke a chair over the head of another; while, in an Episcopalian Methodist meeting, a young lady thrashed a man at his prayers most unmercifully with a bull's hide, and on his raising his face, she flung a handful of cayenne pepper on it. A very backward state indeed of civilization in some of the regions of the colony is evidenced by these stories. A camp-meeting perhaps discloses more extraordinary vagaries than are to be met with in any other Nonconformist rites. In the midst of the forest is

erected a barricade, with some small shanties, like fishermen's huts in England; large fireplaces are built on posts, in which blazing fires are lighted. The minister jumps to his feet, and opens with a prayer in a soft and gentle tone, in the course of which a few groans are audible from the kneeling assembly; these become gradually louder and louder; then the women begin to scream, and soon the scene resembles Bedlam—or rather ten Bedlams—broken loose; the males beat their heads, the females shriek and faint, and this exhibition may continue for an hour or more, till all are quiet from sheer exhaustion. After awhile rises another minister, and the whole programme is repeated over and over again, with only an interval of rest at night, for a week and upwards. The scenes behind the curtain will not admit of being described in detail. At a little distance from the camp, casks and bottles are passed about among the crowd, and intoxication, with its attendant evils, rides rampant among these deluded votaries of a religion that might have disgraced heathenism. The Baptists in my neighbourhood seem to select the winter months for the dipping of their followers, and I was told that the immersion in our climate had proved fatal to several persons. There are a few itinerant Shakers, who reside principally in the States, carrying garden seeds about the country for sale. The Menonists and Tunkers are nearly extinct here.

As may easily be imagined, a certain amount of rivalry and ill-will shows itself among some of the members of so many denominations, especially at that season of the year when their time and thoughts are less occupied with work. However, on the whole, a feeling of good neighbourhood may be said to prevail among the settlers. And let us hope that, as the means of spreading the pure and ennobling worship and teaching of our own Church are multiplied, these jealousies will gradually subside, and these degrading exhibitions of ignorance and blasphemy will vanish in the light of Christian truth.

CHAPTER IX.

Amusements—Hydrophobia—Variations of temperature—Lakes—Animals and Fish—Increase of population, of commerce, and of general prosperity in the colony—Schools and Colleges.

As before stated, our country amusements are not numerous. In the towns, besides the skating rinks and the curling, a game called "shinning" is a favourite diversion with the boys; it is the same, or nearly the same, as our hockey. A trotting match on the ice is an exciting pastime, and one that frequently takes place; and some of the horses are remarkably fast trotters. Speaking of them, I may just observe, *en passant*, that there is a fine opening in Canada for veterinary surgeons, which class is only represented in the smallest degree; and in my own neighbourhood a broken-down negro was our sole horse-doctor. Yachting is on the decline. When the Prince of Wales visited Canada a few years since, he gave a cup to be contested annually, but it is the cause of so much trouble and expense to the winner, who has to insure it while in his custody, that yachtsmen are beginning to tire of it. Both in the larger and smaller class of yachts, American-built crafts have

been gaining every prize of late; the winner in the former class is the property of an English gentleman. Sailing across the ice in ice-boats is capital fun; they work to windward like a sailing-vessel, and when they go about you will be pitched overboard, unless you are very careful; in a strong wind they will glide along for twenty miles or more in an hour. In the summer cricket has been in great force of late years, and most of the small towns can turn out a decent eleven. The billiard tables are generally very poor; every angle is marked, and the balls and the pockets are too large. The four-balled game is the one principally in vogue.

There are many varieties of dogs, but a thorough bred one of any sort is rarely seen; they are allowed to run about, and the breeds get mixed. The two most useful to the sportsman are the retriever for ducks, and the hound for deer—the latter should not be too finely bred. Hydrophobia is sadly prevalent, and several persons died last year from being bitten. One instance occurred of a man bitten in June, who survived till December. November is the worst month in Canada for this fearful disorder, and the same is, I believe, the case in England; in Norway, and Lapland also, dogs are more frequently attacked by madness in winter than in summer.

I will now endeavour to convey some idea of the seasons and their temperature; the two following tables are taken from the Records of

the Provincial Magnetic Observatory, by Professor Kingston :—

MEAN MONTHLY AND ANNUAL TEMPERATURE AT TORONTO, FROM 1840 TO 1859.

1840 to 1859	Jan.	Feb.	March.	April.	May.	June.
	23°·72	22°·83	30°·07	41°·00	51°·38	61°·27
1840 to 1859	July.	Aug.	Sept.	Oct.	Nov.	Dec.
	67°·06	66°·12	57°·98	45°·27	36°·65	25°·97

Mean annual temperature, 44°·11.

MEAN MONTHLY AND ANNUAL FALL OF RAIN AT TORONTO, FROM 1840 TO 1859.

1840 to 1859	Jan. In.	Feb. In.	March. In.	April. In.	May. In.	June. In.
	1·408	1·043	1·553	2·492	3·305	3·198
1840 to 1859	July. In.	Aug. In.	Sept. In.	Oct. In.	Nov. In.	Dec. In.
	3·490	2·927	4·099	2·257	3·109	1·606

Mean annual fall of rain, 30·859 inches.

In 1862, the hottest day was August 8th, the temperature being 79°·08; the coldest was the 23rd of January, the thermometer showing 2°·42 below zero.

The number of days on which rain fell was 118, the total fall being 25·529 inches. Snow fell on 72 days, and the total depth was 85·4 inches; the

greatest depth in one day (March 20th) was 9·0 inches. There were twenty-four thunderstorms during the year. February was the month of the greatest, May of the least, humidity. November was the most cloudy month; the least cloudy months being May and August.

The inland seas or lakes of North America, comprising an area of nearly 100,000 square miles, differ in some points from other large lakes. There are no mountain ranges of any considerable altitude at any part of the circumference of their basin; the general aspect of the area is that of a great central plain, with successive terraces or plateaux. Their level has not undergone any extensive change for a considerable time; and it is a remarkable fact as regards Lake Ontario, that its waters rise to a considerable height, and subside again, once in seven years. The water of these lakes is noted for its purity, the principal tributaries flowing over rocky beds; they exercise a powerful influence over the climate, which they render more temperate. In the winter curling mists are observed overspreading them, when the ice is "taking," as it is called. These are caused by the colder air of the surrounding atmosphere condensing the moisture of the warmer air on the surface of the lakes. The prevailing winds are from the north-east and south-west. Occasionally a tornado strikes the lakes, accompanied by waterspouts.

With regard to the declination and dip of the magnetic needles, they are subject to very remarkable local variations in many parts of the vicinity of these inland seas, owing no doubt to the iron disseminated through the rocks, and to the massive beds of it which are found within the area of the basins; these variations, however, do not occur in the compass of a vessel on any of the lakes.

It is well known that there is an inexhaustible supply of salt water at different depths below the surface of Ontario, especially near Syracuse, St. Catherine, and Grafton. The lakes, which formerly were doubtless all salt, have become fresh (unlike the Caspian and others), by their having outlets in their several communications with each other, and with the main stream of the St. Lawrence, thus allowing the waters of the rivers by which they are fed to flow through them. In 1678, a vessel of sixteen tons was launched on Ontario by La Salle, and in 1679 another of sixty tons on Lake Erie. The first trading port was Oswego.

None of the indigenous animals are identical with those of the same genus in the Old World, although among some there is a close resemblance. For example, the common deer (*Cervus virginianus*) of this land, although nearly allied to that of Great Britain, yet differs in some points from it. And Agassiz, the highest authority in icthyology, declares

that Canada does not possess a single fresh-water fish corresponding exactly with any in the mother country, though many are of the same type. One of our most singular fish is the Lepidosterous or bony-scaled fish, which is found in Lake Superior, and in the Ottawa and other rivers in the north. It is remarkable as being almost the only species now existing which, in the nature of its scales, and its heterocircal tail and other parts of its structure, shows a very strong family likeness to the fossil fishes of the other formations.

The furs, and, still more, the fisheries, of the western lakes form a branch of commerce of considerable and growing value. White fish, trout, and sturgeon, attain a great size in Lakes Superior and Huron, and from Lake Erie alone the exportation has been enormous. In 1782, the country around the lakes was almost a wilderness. In 1851, the population of Upper Canada was under a million; by the census of 1861, the numbers were 1,396,091.

There are various routes of intercommunication between the lakes and other parts of the continent. No river, except La Plata, in South America, possesses so wide an estuary, and is navigable for large vessels to such a distance from its mouth, as the St. Lawrence. Ships of 800 tons go up to Montreal, whence there is a continuous water communication for 2000 miles. But the best route

for export and import from and to the Lower Provinces, saving only during the season when the navigation is closed, is by the Gulf of the St. Lawrence.

From the following statistics it will be seen to what an extent live stock and farming produce have increased in the last few years, and the growing prosperity of the farming interest in Canada West will be sufficiently apparent :—

In 1851 the total number of head of live stock was 2,488,653. By the last census the numbers were—

Milch cows . . .	451,640
Oxen and steers . .	99,605
Young cattle . . .	464,083
Horses, of all kinds . .	377,681
Sheep	1,170,225
Pigs	776,001
Total . . .	3,339,235

In 1851, the wheat crop was 12,692,852 bushels, the weight of wool was 2,398,764 lbs.; but, without going through the whole of the farm produce for the year 1851, I will give that for the year 1860, merely stating that the items generally show as large an increase as the foregoing :—

Wheat,	bushels . .	24,620,425
Barley	,, . .	2,821,962
Rye	,, . .	973,181
Peas	,, . .	9,601,396
Oats	,, . .	21,220,874
Buckwheat	,, . .	1,248,637
Indian Corn	,, . .	2,256,290
Potatoes	,, . .	15,325,920
Turnips	,, . .	18,206,959
Mangel-wurzel	,, . .	546,971
Carrots	,, . .	1,905,598
Beans	,, . .	49,143
Clover	,, . .	61,818
Hay	tons . .	861,844
Hops	,, . .	247,052
Maple sugar	lbs. . .	6,970,605
Cider	gallons . .	1,567,831
Wool	lbs. . .	3,659,766
Butter	,, . .	26,828,264
Cheese	,, . .	2,687,172
Flax and hemp	,, . .	1,225,934
Tobacco	,, . .	777,426

The value of the wood of the white pine in 1852 was £1,000,000, and now it is nearly double; the next in order is the timber of the red pine, the oak, and the elm. The pearlashes, gathered from the ground in the new clearings in 1852, yielded a

return of £232,004. Fur and skins exported fetched £25,547.

As regards the productions of the seas and lakes, large quantities of cod, salmon, and herring, from the Gulf of St. Lawrence, and white fish and trout from the lakes, are annually dried and pickled for exportation. The worth of the exports in 1852 was £74,462. The lake fisheries are at Prince Edward, on Lake Ontario, and on Lake Huron.

As has been remarked in the chapter on minerals, very little has been done towards developing the peculiar capabilities of Canada for the production of iron, and this is particularly the case with respect to malleable iron and steel of the finest quality.

The manufacture of fire-engines has been brought to a great pitch of perfection—Mr. Perry, of Montreal, having gained the first prize in the London Exhibition. At Melbourne, axes, planes, and other edged tools, with scythes of excellent quality, are manufactured. All kinds of spades, shovels, and nails are made in various places; also ploughs, harrows, cultivators, and threshing and separating-machines, with the latest improvements. Capital types and stereotypes for printing are cast in Montreal. The saw-mills in Ottawa and Chicoutimi are, I believe, the largest in the world; and grist-mills are abundant. The making of surgical and of musical instruments is yet in its infancy, but both have been commenced at Montreal and at Toronto.

The manufacture of cotton is carried on to some extent; new works have lately been erected at Hastings, in the counties of Northumberland and Durham, and in other parts. Woollen fabrics, and woollen and cotton mixed, for Guernsey frocks, hose, etc., are to be had in plenty in Western Canada, and the quality improves yearly. The blankets from Dundas are highly spoken of, and those made by Mr. Greenwood, in his factory near Grafton, are also deserving of much commendation, and have the additional recommendation of costing only £1 8*s*. the pair, and weighing eleven pounds. The manufacture of leather is carried on to a considerable extent, and hemlock bark is commonly used in tanning. Many other manufactories of different sorts are at work on a large scale at Montreal and Toronto, such as those for writing, printing, and wrapping paper; flint-glass; plaster of Paris ware; bricks and tiles; soap and candles; without including the making of maple-sugar to an enormous amount, sold at fourpence a pound. About forty vessels are annually built at Quebec, of some 800 tons and upwards.

Excellent grammar-schools have been established in most of the provincial towns; there are colleges at Toronto, Kingston, Montreal, Cobourg, and several other places; in Brompton (Canada West) there may also be found a Female Eclectic Institute, and a Female Wesleyan College; and in

every parish, or section, are schools for the poorer classes. A law has lately been passed, granting to the Roman Catholics a free school of their own; but it does not appear to have been framed in a judicious manner, and has given rise to much dissension.

CONCLUDING REMARKS.

The foregoing sketches do not profess to present more than a general outline, which, however, the author hopes may not be altogether useless or uninteresting to the emigrant who is about to become a settler in the backwoods. As to the part of Upper Canada that is most to be recommended, so much must depend on circumstances. For those who purpose going far west, or into the new townships, it would be better for a few families to unite and take up their Government lots together; and it would be very desirable that there should be some mechanics in this small society, for blacksmiths, carpenters, shoemakers, and millwrights are much needed in the woods. In some of the recent settlements, on the erection of a mill by any individual, the legislature has bestowed on him a free grant of land, with other advantages. I am inclined to think, on the whole, that the townships of Peterborough and Victoria are the best adapted at the present moment for newly-arrived emigrants. Fresh mines are being constantly discovered in different localities; and as lumbering must go on to a considerable extent for many years to come, the

settler will readily find a good market for his produce. In the course of another few years, the country will be opened as far back as the Georgian Bay, and this will enhance the value of the lands. The summer is the most favourable time for the voyage out to Canada — about June especially; before the end of that month the black flies make travelling through the backwoods all but impossible. August and September are very agreeable here; the roads are good, and the country is in full beauty.

From the accounts that have been given of the Island of Anticosti, one may infer that it would not be an undesirable spot to be selected by a few hardy settlers, who are fond of sport, to form a colony for themselves. I have before said that the rivers swarm with salmon, speckled and salmon trout, etc., while the bear, the otter, and the marten abound, and seals frequent the coast in almost incredible numbers. Timber for building purposes is easily procured, owing to the immense drifts of logs, etc., on the shores. A schooner from Quebec visits the inmates of the lighthouse twice annually. I quote the words of Mr. Richardson, who has surveyed Anticosti: "But such is the condition of the island at present, that not a yard of the soil has been turned up by a *permanent* settler; and it is the case that about a million of acres of good land, at the very entrance from the ocean to the province, are

left to lie waste, while great expenses are incurred to carry settlers to the most distant parts of the West. Taken in connection with the fisheries of the St. Lawrence, it appears to me that the establishment of an agricultural population in the island would not only be a profit to the settlers, but a great advantage to the province at large."

Let us now suppose that a party of six wish to go in company to Anticosti, and endeavour thus to calculate their expenses for a year:—

The passage to Quebec .	£120	0	0
A boat (second hand) .	30	0	0
Nets, traps, etc. . .	30	0	0
Flour	12	0	0
Meat	12	0	0
Tea	10	0	0
Sundries	20	0	0
Furniture, etc. . . .	25	0	0
6)	£259	0	0
	£43	3	4

According to this calculation a man could enjoy a year's sport (shooting, fishing, and trapping) for less than £50; and, in all probability, the sale of the fur would cover his expenses, of course leaving the boat, nets, etc., still in hand.

A civilian owning a small capital yielding about £100 per annum, or an officer on half-pay, could

live well in Canada; the latter might hire a little place, with a few acres, whereon to feed his horse and cow, drink excellent beer, and smoke first-rate tobacco, to say nothing of enjoying independence, and mixing in good society, while in England his scanty pension will barely make both ends meet, and his poverty keeps him in the background. A man in this country may procure capital board and lodging, with washing included, and the occasional use of a horse or team if required, at the rate of ten shillings a week. Money-lenders, or, in colonial phrase, bill-shavers, often amass large fortunes, lending their money on safe securities at, perhaps, £50 per cent. per annum on small sums for a short period. Money can be securely invested at £10 per cent., and bank-stock pays £8 per cent. interest.

The winters are sometimes tolerably mild; the first I passed here I lived in a tent without a fire till the middle of January, and last Christmas we had not more than an inch of snow upon the ground, with a brilliant sun, and the thermometer at noon standing at 50° in the shade. In the fall (viz., the months of October and November), the woods are exceedingly lovely, the leaves displaying every conceivable variety of tint and colour, and nature is then beheld in one of her grandest aspects. We have little of the dismal foggy weather so famed for inducing the desire of suicide in weak or de-

praved minds, which at certain seasons visits our native isle. We can generally take plenty of exercise throughout the year, but I cannot say that our Canadian young ladies in the country exert themselves much in this way, though in the towns they make a promenade of one or more of the streets. Their beauty is often remarkable, but it is seldom adorned by the rosy blush of their English sisters, probably owing in a great measure to the influence of hot-stoves, and a life spent too much in-doors. However, they are apt to find the temptations of the skating rinks too strong to be resisted, and these are indulged in by night as well as by day, with a degree of colonial freedom that might astonish some of our sedater damsels at home.

My little work is now at an end. If I have succeeded in awakening a larger amount of sympathy in the breast of any of my readers for this beautiful land, her present condition, and her future prospects ; and if I have, at the same time, been able to convey any useful information to the settler about to seek for himself and his family a new home in the wilderness of the Far West, I shall be well pleased. Long may Canada continue to prosper and go forward in the race of nations ! and should the period ever arrive (at present apparently far distant) when the child, having attained to full maturity, should desire to dissolve her union with the mother country, and assume her place in the world as an independent

kingdom, may the severance be peacefully accomplished, without destroying those feelings of affection and goodwill towards England which are the glory of her colonies, and which have so powerfully contributed to their existing state of greatness and prosperity.

APPENDIX.

APPENDIX A.

EXTRACTS FROM GOVERNMENT PAMPHLETS.

COLONIZATION, CROWN LANDS.

GEOGRAPHICAL POSITION.

CANADA extends from the Gulf of St. Lawrence on the east, to (according to some authorities) the Rocky Mountains on the west, embracing an area of about 350,000 square miles, or 240,000,000 of acres, independently of its north-western possessions, not yet open for settlement. The River St. Lawrence, and Lakes Ontario, Erie, St. Clair, Huron, and Superior, with their connecting rivers, form a remarkable natural boundary between Canada and the States of the Union, and a means of communication of surprising extent, and unrivalled excellence.

CONSTITUTION AND GOVERNMENT.

An integral part of the British Empire, Canada enjoys perfect religious, social, and political freedom. The Governor is appointed by the Crown, and is its representative in the province. He nominates an Executive Council, who are his advisers. There are two legislative bodies, called the Legislative Council and the Legislative Assembly, the members of which are elected by the people. All public offices and seats in the Legislature are open to any candidate possessing the confidence of the people, holding a certain limited amount of property, and being at the time a British subject. Three years' residence entitles a foreigner to all the rights and privileges of a natural born citizen. Aliens can buy, hold, and sell land.

MUNICIPAL INSTITUTIONS.

The municipal system of Canada is admirably adapted to the exigencies of a young and vigorous country. In order to comprehend it, it is necessary to state that Upper Canada is divided into counties, forty-two in number; the counties are divided into townships, the latter being about ten miles square. The inhabitants of a township elect annually five councillors; the councillors elect out of this number a presiding officer, who is designated the Township Reeve; the reeves and the deputy reeves of the different townships form the County Council; this council elect their presiding officer, who is styled the Warden. In each county there is a judge, a sheriff, one or more coroners, a clerk of the peace, a clerk of the county court, a registrar, and justices of the peace, which officers are appointed by the Governor in Council. All township reeves, wardens, mayors, and aldermen, are, *ex officio*, justices of the peace.

CROWN LANDS.

Several millions of acres of surveyed lands are always in market, and the prices fixed at which intending settlers can acquire them, upon application to the respective Crown land agents. The names of these agents, their residences, and how to get there, will be found below. The prices of Crown lands vary from seventy cents cash, to one dollar, and one shilling an acre, on time, according to locality.

Crown lands in Upper Canada are sold for cash, at seventy cents an acre, and, on time, at one dollar an acre, one-fifth to be paid at the time of sale, and the remaining four-fifths in four equal annual instalments, with interest at six per cent. on the purchase money unpaid. On the north shore of Lake Huron, and at Fort William on Lake Superior, lands are sold on time at twenty cents an acre. All Crown lands in the newly-surveyed territory are subject to settlement duties, and no patent in any case (even though the land be paid for in full at the time of purchase) shall issue for any such land to any person who shall not by himself, or the person or persons under whom he claims, have taken possession of such lands, within six months from the time of sale, and shall from that time continuously have been a *bonâ fide* occupant of, and resident on the land for at least two years, and have cleared and rendered fit for cultivation and crop, and had under crop within four years at farthest from the time of sale of the land, a quantity thereof in the proportion of at least ten acres to every one hundred acres, and have erected thereon a habitable house, and of the dimensions at least of sixteen by twenty feet. Timber must not be cut without license, except for agricultural purposes.

There is generally on Crown lands an unlimited supply of the best fuel. The conditions of sale allow the settler to cut and sell from his lot whatever timber he thinks proper,

by taking out a license, which can be had on application to the Crown land agent. The value of the timber thus cut is applied in payment of the purchase money due to the Crown. Even in burning the timber which he does not sell, the settler can convert the ashes into potash, which will meet a ready sale at from £7 to £9 currency per barrel.

Purchasers of lands, after paying a first instalment, can raise from the land itself and from the timber on it, the means of paying the balance of the purchase money, and by their own exertions, in a short time be possessed of a valuable property; the pioneer settler thus becoming the independent farmer.

COLONIZATION ROADS.

Government has opened several great lines of road on which free grants of one hundred acres are given to actual settlers. The conditions of location are:—That the settler be eighteen years of age. That he take possession of the land allotted to him within six months. That he build a log house 16 by 20 feet. That he reside on the lot and clear and cultivate ten acres of land in the course of four years. Members of a family having land allotted to them may reside on a single lot, thereby exempting them from building and residence on each location.

The roads in Upper Canada are:—

1st. The Ottawa and Opeongo Road, which runs east and west, and will connect the Ottawa with Lake Huron. Resident Agent, T. P. French, Clontarf. Route, by Grand Trunk Railway and Ottawa River, or Railway to Ottawa City, thence by stage and steamer to Farrell's Landing.

2nd. The Frontenac Road, running north of Kingston,

through the county of Frontenac. Resident Agent, James Spike, Deniston. Route, by Grand Trunk Railway to Kingston.

3rd. The Addington Road, running north and south, through the county of Addington. Resident Agent, E. Perry, Tamworth. Route, by Grand Trunk Railway to Napanee.

4th. The Hastings Road, running nearly parallel to the Addington Road, and connecting the County of Hastings with the Ottawa and Opeongo Road. Resident Agent, M. P. Hayes, Madoc. Route, by Grand Trunk Railway to Belleville.

5th. The Burleigh Road, running through the townships of Burleigh and Anstruther. Resident Agent, Joseph Graham, Peterborough. Route, by Grand Trunk Railway to Cobourg and Peterborough. The Burleigh Road to join the Peterson Road will be finished in two years.

6th. The Bobcaygeon Road, running from Bobcaygeon, between the counties of Peterborough and Victoria, north, and intended to be continued to Lake Nipissing. Resident Agents: for southerly portion, R. Hughes, Bobcaygeon; for northerly portion, G. G. Boswell, Minden. Route, by Grand Trunk Railway to Cobourg and Peterborough, and thence by steamer to Bobcaygeon.

7th. The Victoria Road, running north through the county of Victoria to the Peterson Road. Resident Agent, G. M. Roche, Lindsay. Route, by Grand Trunk Railway to Port Hope and Lindsay.

8th. The Muskoka Road, running from Lake Couchiching to the Grand Falls of Muskoka. Resident Agent, R. J. Oliver, Orillia. Route, by Northern Railway from Toronto to Barrie, thence by steamer to Orillia.

By means of these roads access is obtained to townships recently surveyed by Government and now open for settlement. They are chiefly of excellent quality, and well

adapted, in respect of soil and climate, to all the purposes of husbandry.

The roads in Lower Canada are :—

1st, The Elgin Road, in the county of L'Islet, about thirty-five miles long, from St. Jean, Port Joly, to the provincial line; and that part of the Taché Road, from the county of Bellechasse to that of Kamouraska, inclusive, about 100 miles. Resident Agent, S. Drapean, St. Jean, Port Joly.

2nd. The Matapedia Road, from Fleurian to River Restigouche, forty-six miles; and that part of the Taché Road, from the county of Kamouraska to that of Rimouski, about 100 miles. Resident Agent, J. B. Lepage, Rimouski.

3rd. The Temiscouata Road, from Rivière du Loup to Lake Temiscouata. Resident Agent, L. N. Gauvreau, Isle Verte.

DIRECTIONS TO EMIGRANTS AND OTHERS WISHING TO PURCHASE CROWN LANDS.

Emigrants and others desirous of purchasing Crown Lands should make application to the respective local Crown Land Agents, who are required by law to furnish all applicants with correct information as to what lands are open for sale.

The Government Emigration Agents at Quebec, Montreal, Ottawa, Kingston, Toronto, and Hamilton, will afford information and advice to emigrants respecting the best means of reaching the localities in which they intend to settle.

DIRECTIONS TO PARTIES CORRESPONDING WITH THE DEPARTMENT OF CROWN LANDS.

Applications to purchase wild lands, in newly surveyed or thinly settled townships, should be made to the local agent, and if the lot sought to be purchased is at his disposal, at a fixed price, he will sell under existing regulations. If the lot has not yet been advertised, and placed at the disposal of the agent, no sale of it can be made until that is done, unless the applicant is in actual occupation, with valuable improvements: in that case he may, at his own expense, procure the services of the agent (if the lot be within the jurisdiction of one) to inspect it, or furnish him satisfactory evidence, by affidavits of two credible and disinterested parties, or the report of a sworn surveyor, to enable him to report to the department the following particulars, viz.:—

The whole time the lot has been occupied; by whom now occupied; the nature and extent of the improvements owned by applicant, and whether there are any adverse claims, on account of improvements made by any other party on the same piece or parcel of land.

If the lot is public land, but not within the jurisdiction of any agent, the application should be made direct to the department, applicant being careful, in order to avoid delay and prevent unnecessary correspondence, to transmit at the same time the evidence by affidavit or surveyor's report, as above stated.

The same rules should be observed by applicants to purchase Public Lands situated in the old settled townships, with these additions: that in cases where the applicant occupies improvements made by his predecessors on the lot, he should show by assignment or other evidence, how he obtained possession of them, and that he is now the *bonâ*

fide owner of the same. The present full value of the land per acre, exclusive of improvements, should also be stated by the agent, the surveyor or deponents, as the case may be. All papers necessary to substantiate the applicant's claim or right to purchase, if the application is made direct to the department, should accompany the first application.

All assignments, whether by squatters or purchasers, must be unconditional, to be recognized by the department.

Applications for information relative to the dates of patents and the names of patentees should, invariably, be made to the provincial or deputy provincial registrar.

Parties writing to the department should give their post office, the date and number of the last letter (if any) they received from the department on the subject. They should, if they can, state whether the lots they write about are Crown, Clergy, or School Lands. Each letter should be confined to one subject; the signature should be distinctly written, and the letter addressed to "The Honourable the Commissioner of Crown Lands."

Every applicant of letters patent for lands, should state his Christian name at length, with his occupation and residence, as these must be stated in the letters patent.

INSTRUCTIONS TO IMMIGRANTS WITH SOME CAPITAL.

Immigrants with some capital, desirous of settling on land, and unaccustomed to life in the bush, would do well to purchase a lot with a house, outbuildings, and a few acres of clearance. Lots of this description are always to be found in the newly-settled districts, the title to which is still in the Crown. In such cases a small sum must be given for

the right and improvements of the original purchaser. The patent would then be issued on payment of the balance of the purchase money due to the Crown, and on completion of the required settlement duties.

The Crown Land agents will aid immigrants inquiring for improved lots within their agencies, for which patents have not been issued. They will say where such lots are to be found, and they will assist, if requested, in drawing up the necessary assignment to the purchaser, for registration in the department of Crown Lands.

APPENDIX B.

EMIGRATION TO CANADA.

(From "*The Albion*" of May 30, 1864.)

The subject of emigration has recently attracted much attention in Canada, and has led to several discussions in the provincial parliament. It would appear from the statements of the honourable members that Federal agents are busy there as in England, attempting to attract newly arrived emigrants from Canada to New York and other Federal cities, with a view to enlisting them in the Federal armies. This drain on Canada had seriously affected the labour market, and the legislature had under their consideration the best means of putting an end to this system. In the Legislative Council, on the 10th May, the Hon. Mr. Alexander moved for a select committee to consider and report upon the best means to be adopted to attract an increased number of immigrants and settlers. At present they had *no* agents in the United States or on the European Continent, and although they had a department of agriculture

and emigration, little or nothing had yet been done to promote an influx of settlers. In his opinion they could easily receive and absorb from 30,000 to 40,000 immigrants annually, all of whom could find comfortable homes and hiring by their labour. Manufactures of various kinds were rapidly springing up; and he thought that if care was taken with the immigrants on their arrival, and the resources of the province set before them, they would prefer peaceful Canada to the United States. The Hon. Mr. Campbell said the province was much indebted to Mr. Alexander for the untiring zeal and energy he displayed on the subject. He begged to second this motion. The motion was carried *nem. dis.* In the Legislative Assembly, on the same day, Mr. M'Gee, Minister of Agriculture, moved the second reading of the bill to amend the acts respecting emigrants and quarantine, and proposing to make, at Quebec, one legal landing-place, and that emigrants should be landed at particular hours, with the regulations designed to check the current of further emigration to the Northern States. In the course of his remarks he maintained the right of the various localities to representation by population. He also maintained that the report of the ex-commissioner of Crown Lands, that there were no more lands suitable for cultivation, for appropriation — a statement which must of necessity prove damaging to immigration — was very incorrect, that in a comparatively small district 9400 situations were now open for immigrants immediately on their arrival. Several other gentlemen spoke in favour of the bill, and reference was again made to the diverting of the immigration stream to the Northern States, and the importance of such provisions as the bill designed to check it. The discussion was adjourned.

Return of the number of male and female servants, mechanics, etc., required in Canada, and for which applications

have been made to the inland agents:—Farm labourers, 6,161; boys over thirteen years of age, 1,115; female servants, 2,892; carpenters and joiners, 165; masons, 131; bricklayers, 57; founders, 14; coopers, 33; smiths, 60; tinsmiths, 5; shoemakers, 70; tailors, 29; miners, 218; tanners, 13; saddlers, 16; wheelwrights, 1; carriage-painters, 2; weavers, 4; gardeners, skilled, 9; grooms, 4,—Total, 10,999. Average rate of wages:—Per month, with board (gold and not currency):—Farm labourers from $7 to $8; female servants, $2 to $5; boys, $2 50c. to $6; carpenters, $14 to $20; tailors, $10 to $14; shoemakers, $10 to $16; saddlers, $12 to $16; blacksmiths, $14 to $20. Per day, without board (gold, and not currency):—Farm labourers, from 70c. to $1; carpenters, $1 to $1 50c.; tailors, $1 12c. to $1 50c.; shoemakers, $1 to $1 25c.; blacksmiths, $1 12c. to $1 50c.; masons, $1 25c. to $1 50c.; coopers, $1 25c. to $1 50c.; tinsmiths, $1 to $1 25c.; founders, $1 25c. to $1 50c.; bricklayers, $1 12c. to $1 50c.

VALUE OF ENGLISH COIN THROUGHOUT CANADA.

Sterling.				Currency.	
£	s.	d.		$	cts.
0	0	1	. . . .	0	2
0	0	6	. . . .	0	12½
0	1	0	. . . .	0	25
0	2	6	. . . .	0	60
0	5	0	. . . .	1	21
0	10	0	. . . .	2	43
1	0	0	. . . .	4	86
5	0	0	. . . .	24	33
10	0	0	. . . .	48	66
20	0	0	. . . .	97	33
50	0	0	. . . .	243	33
100	0	0	. . . .	486	66

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